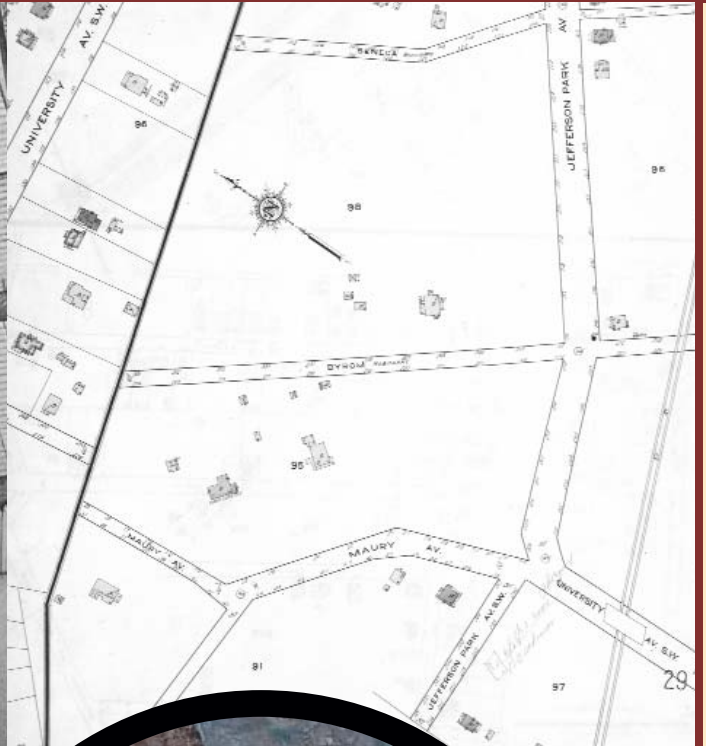
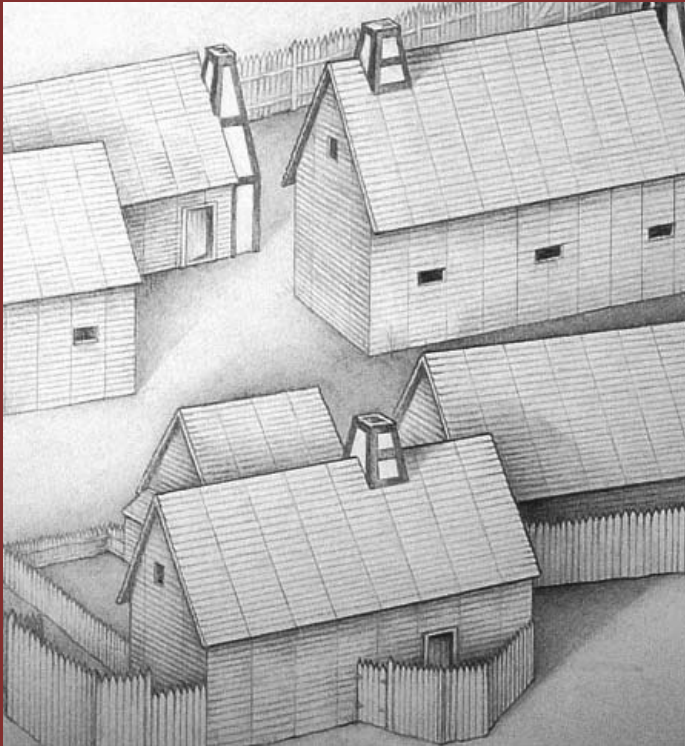


Solving History's Mysteries: The History Discovery Lab



Department of Historic Resources
Teacher Guide and Activity Book

Dear Teacher,

For many students, history comes alive through a good book, a rousing film, an occasional tour of a historic attraction, or an inspiring teacher. Students are excited by these glimpses into the past. But history generally remains a thing apart; in their everyday lives, they do not possess the tools to “read” the history that is all around them.

Solving History’s Mysteries: the History Discovery Lab opens the way to using archaeological sites and historic places to illustrate the processes of discovering the tangible evidence of our past. The exercises in this guide relate the importance of historic resources to your students’ understanding of history and the past to their everyday lives.

Through archaeology and the study of historic architecture, your students will learn how to apply this insight to any building, neighborhood, or community in Virginia. The processes of discovery—involving history, social studies, science, and mathematics—are described in general terms, not necessarily site-specific or as case studies, to emphasize the point that they can be applied universally.

In recognizing and learning the important stories that historic places and objects have to tell, your students will gain the knowledge and skills to deepen their understanding of the people and events that have shaped the world in which they live today. Virginia’s historic resources are our children’s heritage. Used well, these resources will add greatly to the economic and cultural vitality of the places in which, as adults, they will live, work, and play. The processes of discovery will bring your students full circle, for with knowledge and understanding will come the motivation to take care of the historic places that enrich their lives. As future stewards, your students will enjoy being a part of their communities in meaningful ways that connect them to the past and to a richer future.

I hope to see you and your students in the Solving History’s Mysteries gallery of the Virginia Historical Society, our partner in this exhibition, for hands-on experiences that will add to the exciting lessons that follow about reading the history all around us.

Kathleen S. Kilpatrick
Director

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Cover Images: (clockwise from upper left) Artist's rendition of colonial settlement at Jordan's Journey; Sanborn Company map; sorting artifacts at Brook Run Site; image of Side Scan Sonar.

Introduction

For the Teacher

To most of us, archaeology means “digging.” Architecture means “buildings.” Yet when we apply the processes of reading a dig or a building, we find that archaeology and architecture are really about ways of seeing and ways of thinking. They are about how to look at artifacts and historic buildings, and how to think about what we see.

In Virginia, we enjoy a rich legacy of history, dating from the earliest human habitation 16,000 years ago, to the digital age of the 21st century. Giving your students the tools to “read” the history that is all around them will help deepen their learning in four significant ways:

- By showing them the importance of historic resources in understanding history
- By connecting the past to their everyday lives
- By making them aware of the value of historic resources and encouraging a sense of responsibility and good stewardship
- By arming them with the knowledge to see how choices that affect natural and cultural resources shape the communities where they and their children will live, work, and play.



This guidebook is designed for use in conjunction with a school visit to the “Solving History’s Mysteries: The History Discovery Lab” exhibition and in the classroom as part of your regular curriculum. The exhibition provides an interactive environment where your students become involved in the process of discovering tangible clues to the past. In the lab, they observe, experiment, record observations, and reach conclusions (see online information about the exhibition at http://www.dhr.state.va.us/educ/exhibit_intro.htm).

The exercises that follow complement the lab’s activities and are written to cover a wide range of student ages and abilities. We ask that you modify them accordingly, as needed.

The activities correspond to the current History and Social Science Standards of Learning for Virginia Studies, U.S. History I, Virginia and American History, and World History I. All the activities can be used to teach the “skills” standard that appears at each grade level from the fourth through twelfth grades. This is the standard that usually reads, “The student will develop skills for historical and geographical analysis including the ability to identify and interpret artifacts and primary and secondary source documents.”

Ready? We invite you to take your students into the following activities of The History Discovery Lab, and change the way they think.

Note: The Solving History’s Mysteries exhibition was developed in partnership with the Virginia Historical Society. It is located within “The Story of Virginia: An American Experience,” the historical society’s core exhibit. Artifacts from the Virginia Department of Historic Resources’ collections were incorporated into The Story of Virginia, expanding the exhibition to encompass the entire history of human habitation in the Commonwealth. The department and the historical society also have collaborated on two Teacher Institutes on Virginia Archaeology, “History Underfoot.”

History Under Ground

Welcome to the dig! This part of the exhibit shows how **archaeologists** learn about the past by looking at the things people have thrown away or left behind. Archaeologists are like history detectives; we look for clues to the way people lived in Virginia in the past.

We find history under the ground because things get buried over time. Often, we find things from different time periods in one spot on which people have lived for a long time. This history is like a layer cake, and we study it one layer at a time; the deeper we go, the older the things we find.

In the future, archaeologists will study us and the things we have left behind. What will they find in the place where you live and what will they think about your times?



Activity 1: In the classroom: “One Man’s Trash is Another Man’s Treasure”

What can archaeologists learn from garbage? Have your students do the following activity. (Prepared by Kimberly C. Locke, a teacher from Sullins Academy in Bristol, Virginia, and a participant in the Virginia Historical Society/Department of Historic Resources 1999 Teachers Institute, “History Underfoot.”)

- ☐ 1. Gather trash from several different locations throughout the school, trying to be as diverse as possible (not bathroom or cafeteria trash, for sanitary reasons). Mark each bag with an identification number, but do not tell students where it came from.
- ☐ 2. Divide students into groups, distribute gloves, and lay out plastic tarps.
- ☐ 3. Students are to sort through the trash, laying the contents out in chronological order (discuss how objects on the bottom are the oldest), then analyze and sort it as applicable. Remember: Do not dump the garbage out of the bag, as that will destroy the strata.
- ☐ 4. Have students complete a worksheet noting items found, possible uses, possible owners, and what the trash tells us.
- ☐ 5. Have each group give a report and show evidence for their conclusions.
- ☐ 6. Discuss, comparing students’ work to that of archaeologists, who often dig through people’s garbage.
- ☐ 7. How is our garbage different from that of the past?
- ☐ 8. Does this tell us everything about the people involved? (i.e., fancier items are kept or taken better care of, handed down, we don’t know how long something was kept before it was thrown out, etc.)
- ☐ 9. Does garbage change from day to day or through the year?
- ☐ 10. Does one site tell all?
- ☐ 11. Is trash more revealing than what we say or write about our lives?
- ☐ 12. People in the past dumped their household trash right behind their houses, but these days, trucks pick ours up and dump it all together. How will that affect archaeology in the future?

Enrichment—

Students could write a paper or create a graph on the variations they observe from bag to bag (location to location). In the Kindergarten bag, for example, all papers might have block printing, whereas the 5th grade bag might contain 75 percent cursive.

At-risk—

- a) assign groups and tasks within groups according to needs/ability levels
- b) teacher could lead activity, but encourage students to contribute responses. Teacher and class can fill out the sheet together
- c) give students a smaller bag or more clearly recognizable trash items.

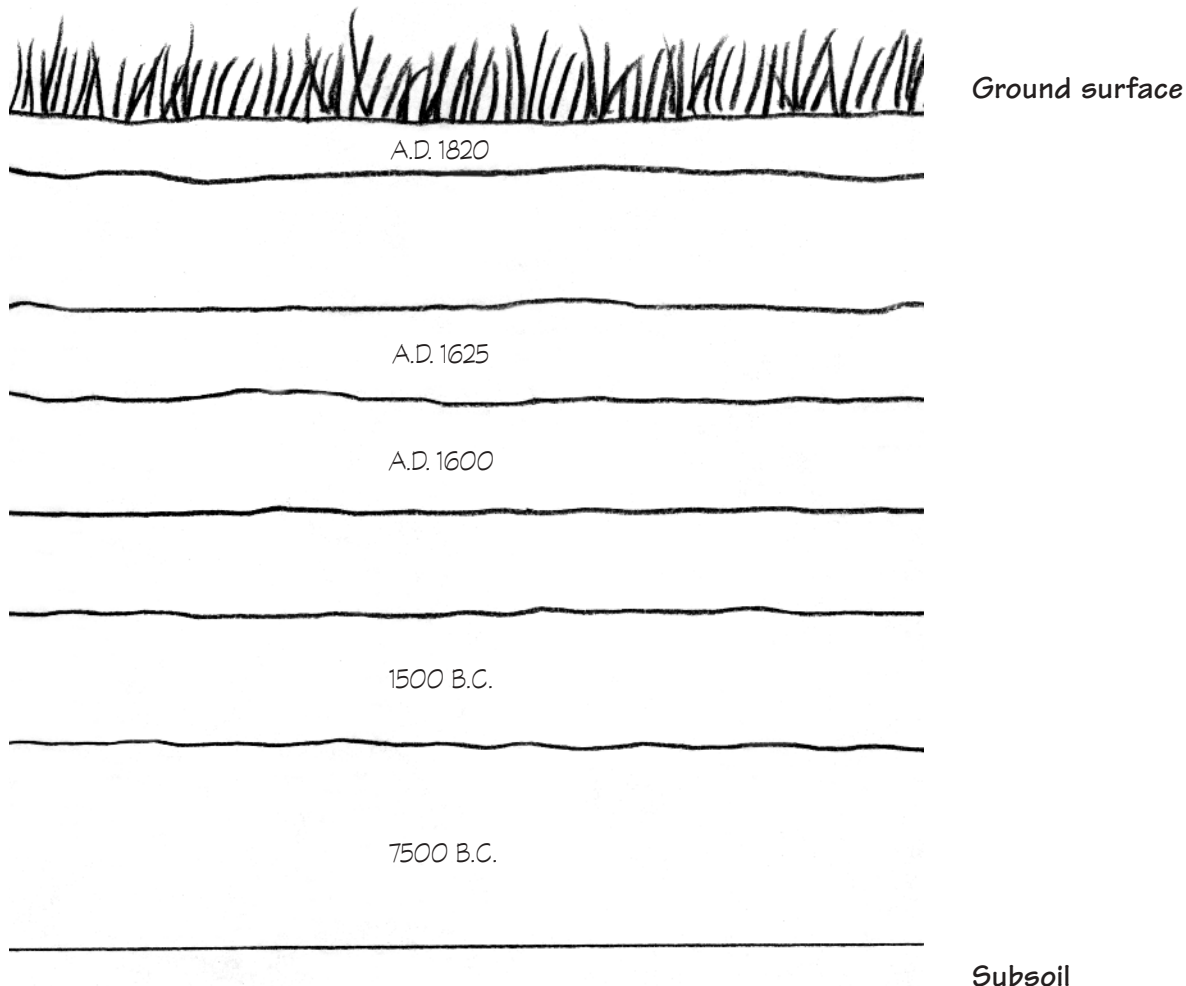
Extension—

- a) have students analyze trash from home (with parents' permission), and write a paper about it
- b) write about "A Day in the Life Of..." based on trash findings—could also be based on types of refuse found in true archaeological digs—"A Day in the Life of the Powhatan Indians," for example.

Why Do We Dig? History in Layers

The ground beneath your feet is like a layer cake. Over time, the soil builds up into layers of various colors and textures. Each layer represents a different period of time. People who lived within the time when a layer was formed leave evidence of their lives in that layer.

Archaeologists remove each layer of soil, one at a time, beginning at the top, or ground surface, and digging down. As a rule, the deeper they dig, the farther back in time they go. Archaeologists stop digging when they reach the undisturbed layer called subsoil.



How Do We Dig? One Chance to Do it Right

Artifacts are clues to the past. And, like detectives at a crime scene, archaeologists at a dig try not to break or disturb anything that might be evidence. We use tools that can gently excavate what we find. And we never take a find away from the dig without first marking down exactly **where** it was found. Digging a site is like reading a book in which pages disappear after they are read. Since we must remove one layer of history to get at the next, we have only one chance to learn the secrets of each. We have to work slowly and carefully, making sure that we record everything we find and where we find it.

What Do We Find? Objects Tell the Story

When we dig a site, we are trying to answer questions about the people who lived there: What did they eat? What did they wear? What was their environment like? The things we find at the dig are our clues. Look at the artifacts in each layer and guess who was living there and what they were doing.

Activity 2: In the classroom: Terminus post quem

Archaeologists use the term “terminus post quem” to refer to the earliest possible date an object could have appeared in the ground. For example, if you find a nickel that was minted in 1917, you know that the coin could not have been placed there before 1917. Copy the list below on the board. Have your students identify or estimate the terminus post quem for each item. Add or replace items on the list according to the abilities of your students. (Answers appear in parentheses.)

color snapshot (1939)

eight-track tape (1965)

ice tray (1933)

Pokémon toy (1998)

tile from a Scrabble game (1948)

digital watch (1972)

Lucky Charms cereal box (1963)

Susan B. Anthony dollar (1979)

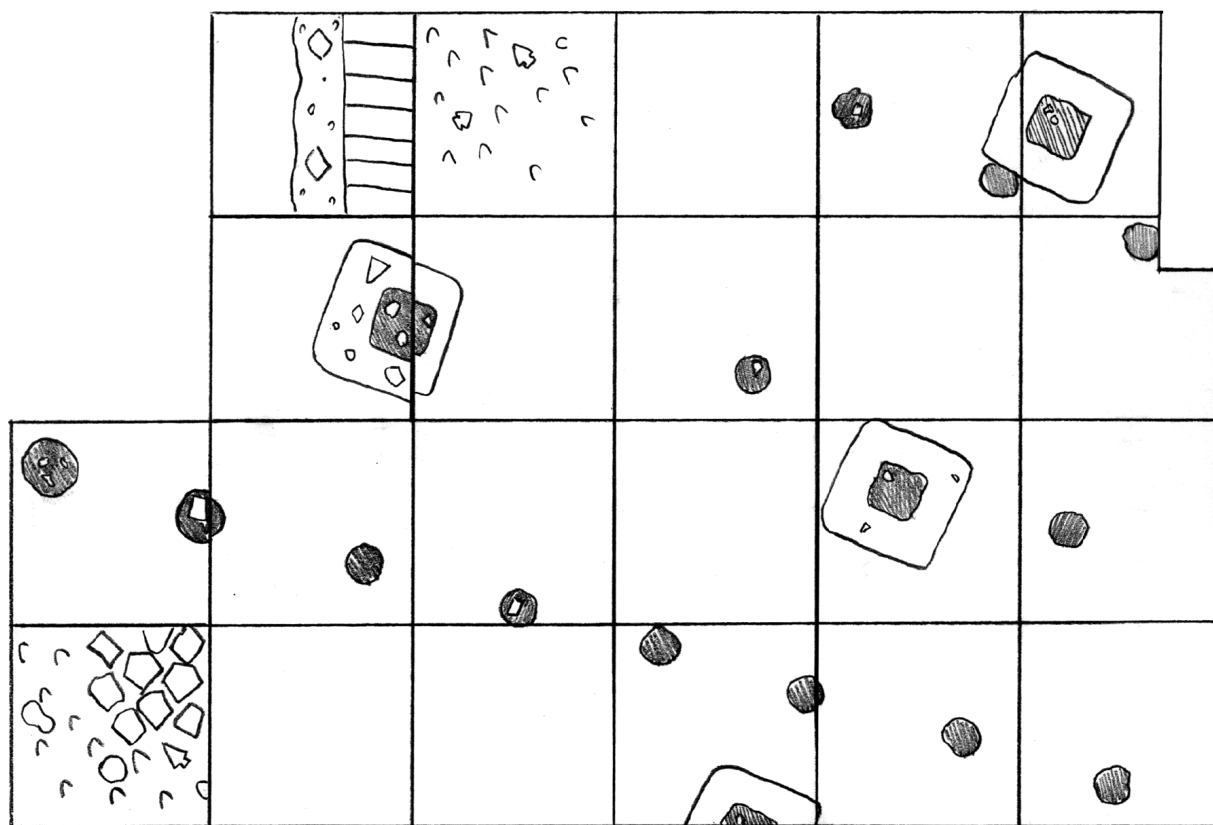
As you do this activity, help your students understand that we live in a consumer society in which technological change is constant. This makes it easier for us to determine the terminus post quem for items that were produced over the past 100 years or so. Explain that it is much more difficult to do this activity for items produced by people who lived before that time.

Notes

How Do We Read a Dig? Relationships Are Important

It's not just what you find, but where you find it. Knowing where something was found can help explain why it was there and what it was used for. We keep very careful records of exactly what is found and where we find it in order to understand a site as a whole. By carefully recording each part of a dig, a map can be drawn of the whole site that makes it easier to imagine how people in the past lived and used the place.

Notice how the dig is organized into equal-sized squares. This is a grid and archaeologists use it to make careful maps of what is found in each layer.



Archaeologists use grids because relationships are important.

Solving History's Mysteries

✎ Activity 3: In the classroom: When You Don't Have All the Pieces

Assemble a 100- or 250-piece jigsaw puzzle for your students. Turn it over and number and letter the pieces. Number horizontally and letter vertically. The top row should be A1, A2, A3, etc.

Divide the class into four or six groups. Give each group the dimensions of the puzzle and, using poster board, have each prepare a grid that size. Tell them how far they need to number and letter, and make sure they make their spaces even. (Your last piece will tell them how far to go; if it is G12, then they need to letter through "G" and number through "12.") Have them number horizontally and letter vertically so that they have a grid like the one pictured below.

	1	2	3	4	5	6	7	8	9	10	11	12
A												
B												
C												
D												
E												
F												
G												

Choose a recorder for each group and give that student a copy of the activity sheet. Give each group one piece of the puzzle. Have the students turn it so they can see the image and place it on the corresponding section of their grid. Then, have them record their findings on the activity sheet. Ask each group which piece they want next (or, where they want to "dig" next). Make sure each group records its finding after each piece. When all the pieces are distributed, have the groups share their findings, or combine groups and continue the task.

Hint: You might want to begin this activity by giving each group three or four pieces.

Activity 3: When You Don't Have All the Pieces

Activity Sheet

What information does
this piece give you?

What piece would
you like next? What
information do you
think it will give you?

What do you think
the whole puzzle
looks like?

Piece
#

Piece
#

Piece
#

Piece
#

Piece
#

Piece
#

(Continue on another sheet)

Digging is Only One Step: Reading the Clues

For every hour we spend at the dig, we spend a day in the lab studying what we find. After we have carefully mapped the site and removed the objects, everything we found is cleaned, catalogued, and numbered so we can always tell what it is and where it was found. Now it can be made available for study. Some artifacts will be repaired and conserved, others will be photographed, and some may be used in scientific analysis to determine their age or to identify microscopic remains of plants or animals. The artifacts themselves do not answer all of the questions archaeologists have. We also use written records to help us discover how and why artifacts were used and why and what various meanings they held for the people who used them. We study historical documents and combine these and artifact analyses to find out about people's beliefs, ideas, and social roles and behaviors.

Activity 4: In the classroom: What Will They Think of Us?

Have your students bring in three small items from home. Tell them to bring in things that they use regularly but are not valuable or irreplaceable. Put the items in separate lunch bags. Number the bags and distribute them randomly to the students, along with copies of the activity sheet. Have students answer the questions, then find the owners of the items in the bags and ask those people about them.

This activity can also be done in groups or pairs. After the activity, go over the results, investigating especially the differences between a student's guesses and the owners' explanations. Among other things, explore the significance that the owners attach to items. (The student/recorder may have written down that an item was a bracelet, though the owner may have talked about the meaning of the bracelet—having received it as a gift from someone special, for example.) Explain how archaeologists might know what an object is but not understand its significance. Be sure to explore thoroughly the last column. An item marked "made in China" or ® will tell us something about the society that used it.

Notes

This image shows a single sheet of white paper with horizontal blue or grey ruling lines. The lines are evenly spaced and run across the width of the page. There are approximately 20 lines visible. The paper has a slight shadow on the right side, suggesting it's resting on a surface.

Solving History's Mysteries

✂ Activity 4: What Will They Think of Us?

Activity Sheet

Physical description
(Size, color, weight,
marks, writing, etc.)

How was the item used?

What does the item
tell us about the
people who made it and used it?

Item 1:

Item 2:

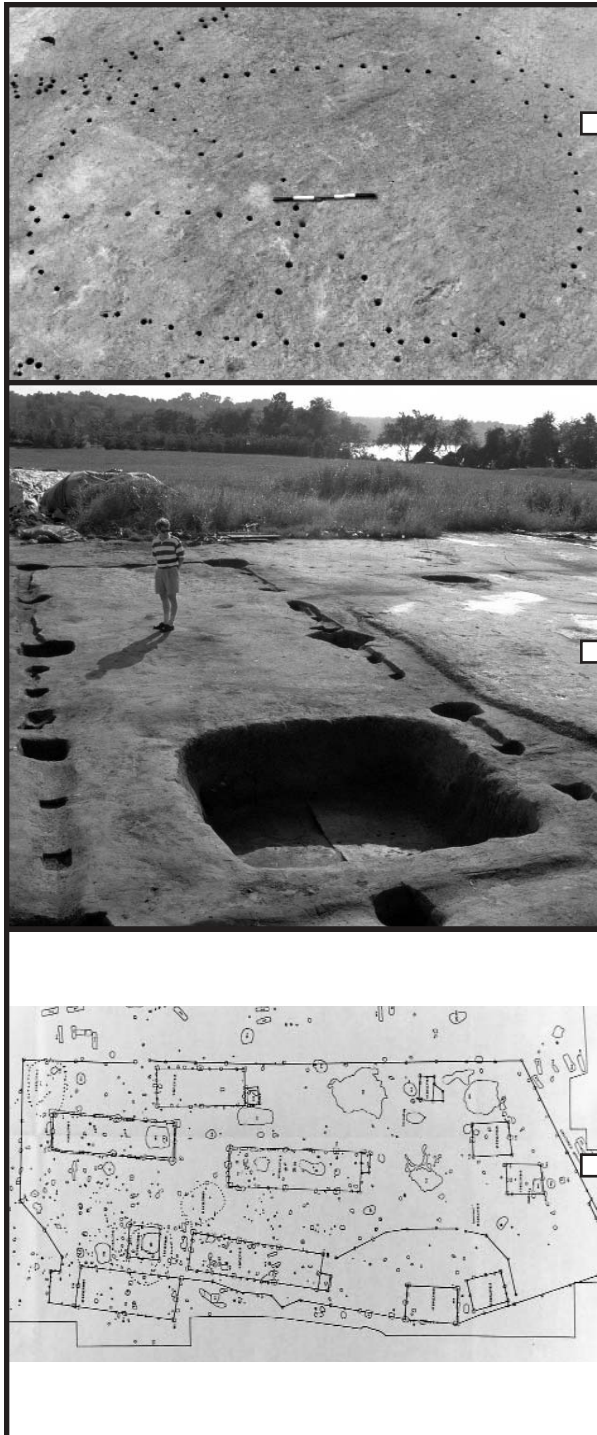
Item 3:

What did the owner tell me about the items that I did not know.

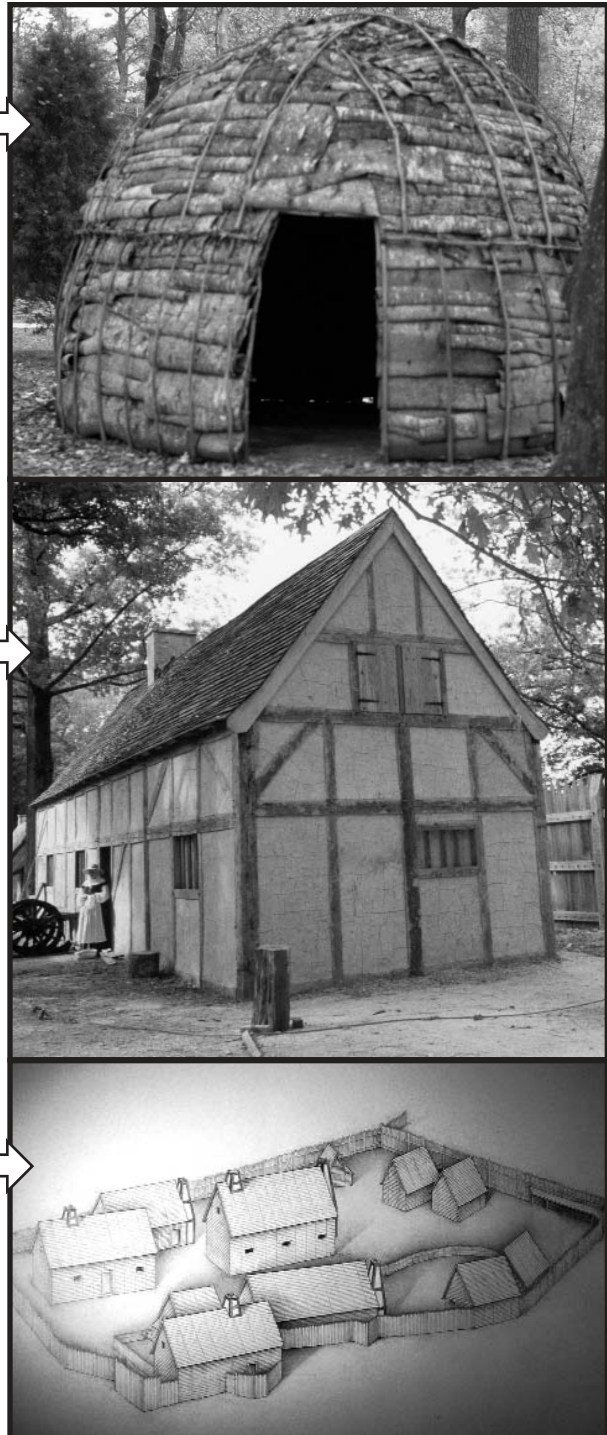
Stories in the Dirt

Sometimes all we find is a change in the color and texture of the soil, not an artifact but what we call a feature. When we see them in a pattern as in these digs, we can guess that they are the stains left by the decayed wooden posts that held up a native house. Over time, the posts rotted away, leaving soil that may be different in color from its surroundings. Features can include foundations, post holes, hearths, and other places made by people. They are very good clues because they tell us where things happened. These post holes tell us where a Native American family lived 500 years ago, and where a colonial family lived about 370 years ago.

What We Find



What We Know



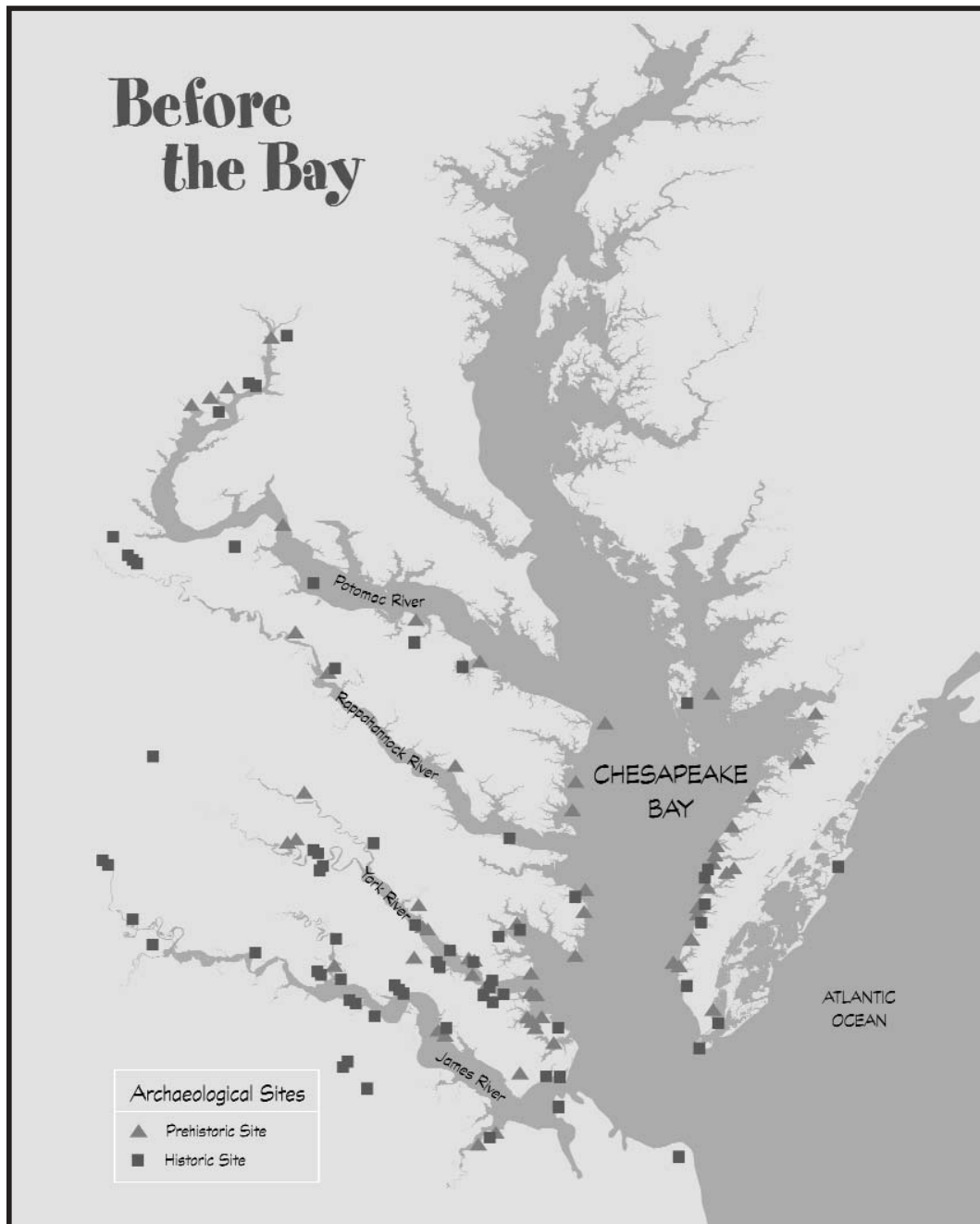
Many people have lived at Jordan's Journey. They all have left evidence of their habitation.

History Under Water

Welcome to the river, where we look for history under the water. Virginians have always lived close to the water and have left a record of their lives under its surface. People have always used the ocean, bays, and rivers and occasionally their boats have sunk. Shipwrecks are like time capsules of past times and provide us with clues about the lives of those who lived before us. But there are also villages that are now underwater. You see, the water levels of the Atlantic Ocean and the Chesapeake Bay have been rising since before people first came to Virginia some 17,000 years ago.

Before the Bay

When people first moved to Virginia, the Chesapeake Bay was just a river. Over time, sea level rose and the bay was formed. Places where people used to live are now under water, giving us a mystery to solve with underwater archaeology.



At one time, the Chesapeake Bay was just a river.

How Do We Find History Underwater?

Archaeological sites are found not only on land but also underwater. Changing shore lines on the rivers and bays over the years put sites underwater that had originally been on land. Sunken ships contain evidence of the period in which they were used.

We use special equipment and techniques to excavate these sunken sites. Those of us who specialize in this sort of work are called marine archaeologists. In addition to diving equipment, we use new non-destructive technologies that enable us to locate and record sites. Side scan sonar, metal detectors, sub-bottom profiler readings as well as underwater photography and video are all used to document our sites.



Excavation of an underwater site is done with the same care as one conducted on land. Drawings and photographs of the site are made and artifacts recorded by their location. This information is then analyzed to tell the history of the shipwreck or the underwater site.

Step #1 is to Find the Site

Have you ever tried to find something under the water? If you have, you know that it's not easy, even if you know where to look.

Sometimes we know where to start looking for underwater history because of maps or written accounts. Sometimes we find just a single artifact that gives us a clue that something important may be down there. But just knowing where to look doesn't mean you've found a site yet. Currents shift objects, silt and sand cover them, and sometimes the water is too murky for divers to see more than a few inches in front of them. One of our best tools for finding underwater sites was developed to help track submarines; it's called side scan sonar and helps us to make a picture of things under water without even getting wet.

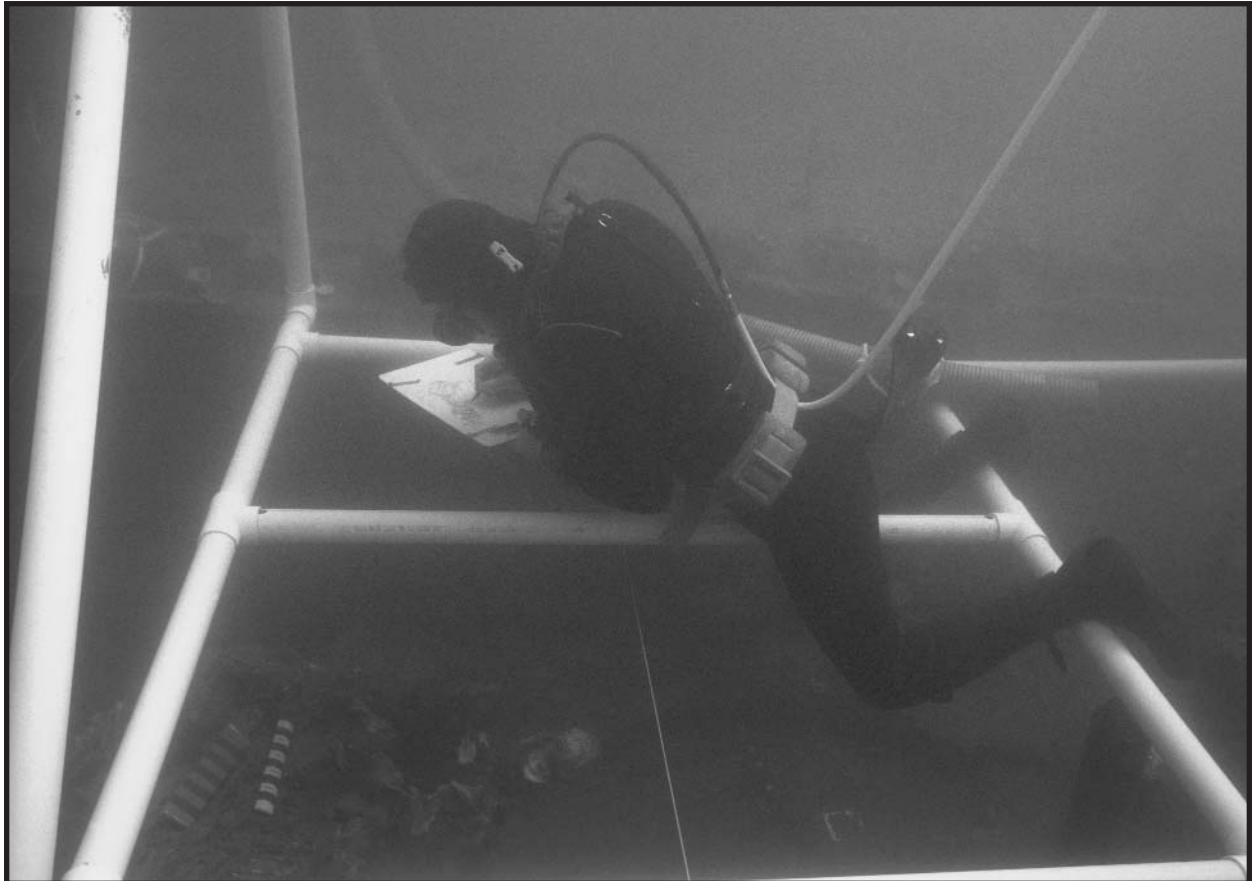


Image of Side Scan Sonar

After all the hard work of finding our underwater site, we need to make sure that we can find it again. We use satellite mapping technology known as *GPS* (Global Positioning System) that can help us pinpoint the exact spot we need to study further.

Step #2 is to Survey and Record the Site

Once we find history underwater, we try to learn as much about it as we can before we leave it or begin to recover artifacts. We use underwater photography and video to understand the condition of the site and side scan sonar, metal detector, and sub-bottom profiler readings to tell us what may be out of sight at the bottom of the river, ocean, or bay. We make a detailed map of what we think is down there to record the site and to help plan for an underwater dig. We may even excavate a small portion to better understand what might be down there and in what condition. Sometimes we only survey a site to document what is there. We can learn a lot about underwater resources without ever disturbing them.



A marine archaeologist collects data at an underwater site.

Notes

Step #3 is to Recover the Data

Just like an archaeological dig on land, we lay out a grid and proceed slowly and carefully, recording not only what we find, but where we find it.



Archaeologists using air lift around tagged artifacts.

Underwater archaeology requires its own set of tools. Instead of shoveling dirt into buckets, we use tools called airlifts that work like gigantic vacuum cleaners to suck up the sand and mud that cover the artifacts; then it is screened on the surface. The sand is then redeposited away from the site. Heavy artifacts are lifted to the surface using giant balloons called liftbags. We usually wear standard diving gear and carry a measuring tape, a special plastic notepad that lets us write underwater, and a digging tool.

Step #4 is Conservation

Cold water and silt help to preserve artifacts by slowing the process of decay. However, the objects we bring up are very fragile and must be kept wet until they can be treated. Waterlogged wood has to have the water in its cells replaced by chemicals or waxes so it won't crack or fall apart. Metals must have the rust and salts removed and a protective coating applied to survive. These conservation techniques can take years depending on the number and type of waterlogged objects that are uncovered. However, once conserved, we can learn new things about the ship or site as markings are revealed and artifacts are researched.



Conservation lab for the Yorktown Shipwreck Project.

Notes

Yorktown Shipwrecks

At the battle of Yorktown, Lord Cornwallis and his British army were in a tight spot: George Washington's army surrounded them on land, and the French navy was sitting at the mouth of the Chesapeake Bay. Cornwallis tried to block the French navy by sinking his own ships in the York River. Lord Cornwallis not only lost his ships but he also lost the battle and Britain lost her colonies. Ever since, the ships have been sitting where he sank them as history beneath the water.

This historic painting shows the masts of Cornwallis' ships above the water at Yorktown. We've known they were out there for a long time but only relatively recently had the technology and funding to find the actual locations and partially excavate one of them.



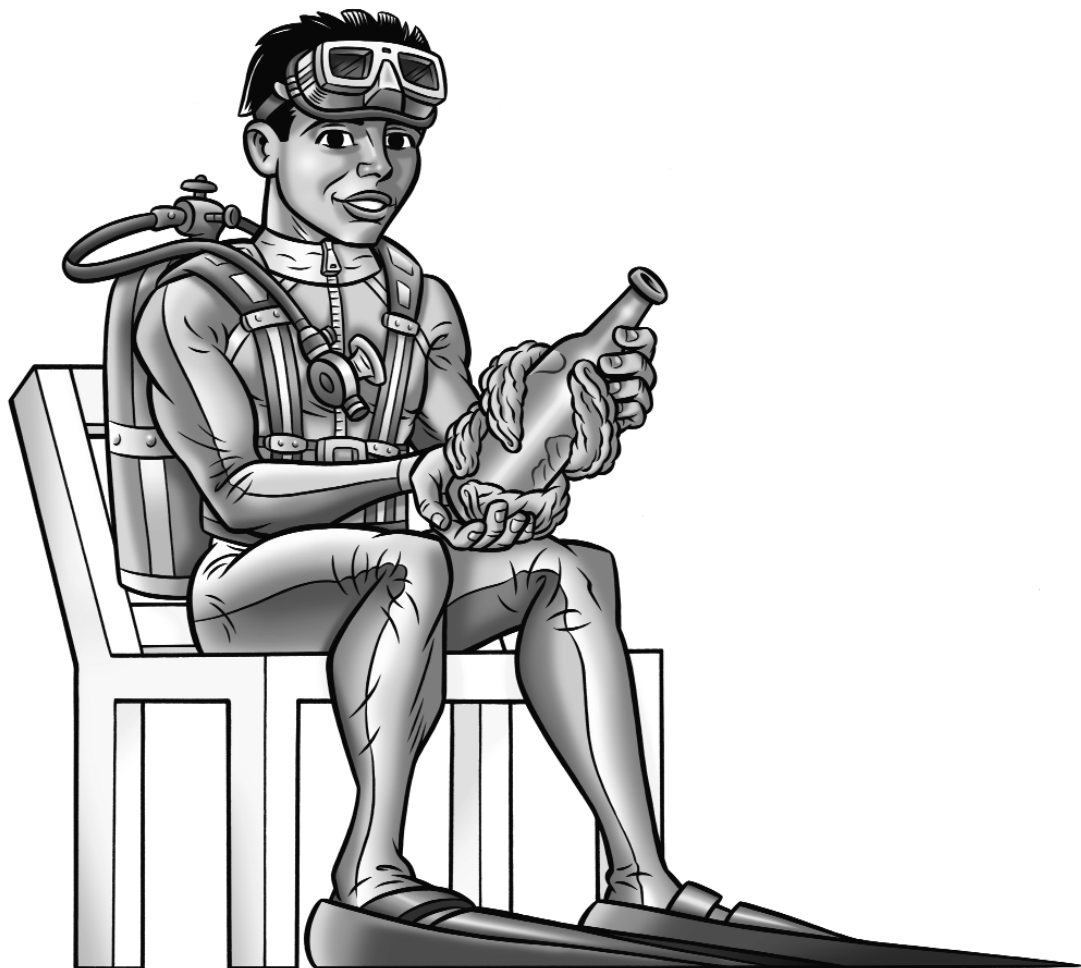
"Washington and his Generals at Yorktown" by James Peale. Courtesy of the Maryland Historical Society, Baltimore

What We Found

Divers at Yorktown worked on the British warship **Betsy** for several years. The hull shape and fittings showed it had been built originally to carry coal. Most of the artifacts found on the ship, including barrels of lead shot, cannon balls, and gun carriages, were intended for the British troops at the battle of Yorktown. Personal objects such as shoe buckles and shoes, glass and brass sleeve buttons, a ceramic whistle shaped like a monkey, and many wine bottles were also retrieved.

Activity 5: What We Found, part 1

Read your students the “Yorktown Shipwrecks” section. Ask, “What might archaeologists have found?” Have them brainstorm ideas and make a list on the board. Remind them that there will be both cargo and personal items belonging to the sailors. Complete your list, then compare it with the items listed in the “What We Found” section above. Compare the items that the archeologists actually found with the items on your list. Ask, “Just because some of these items weren’t found, does that mean that they weren’t on the ship?” Discuss the reasons why items might be recovered while others might not. Ask, “What do these found items have in common?” Remind them that both historians and archaeologists have to use the records that survive, and that these are very incomplete.



Church Neck Wells

Everyone has seen how waves can cause erosion. Since the early 1600s, many entire farms and small settlements have been washed away.

At Church Neck on Virginia's Eastern Shore, waves had washed away everything from a colonial farm. When the property owners found a barrel sticking out of the sand at the water's edge, they called the archaeologists at Department of Historic Resources and we went to check it out. The barrel turned out to be the bottom part of an old well that had been lined with barrels, not brick. Meanwhile, the waves kept coming, so we spent two weeks at the site to record and recover all we could before it was washed away forever. We found seven other barrel wells along the shoreline and artifacts that told us the wells probably dated from between 1670 and 1725. That's a lot of wells for one farm.

We also found the remains of a tanning pit. A check of local records told us there was a tannery there in the 1600s.



Archaeologists excavate and record the remains of the wells at Church Neck.

What We Found

The bottom of a well is a good place for archaeologists to find clues because discarded artifacts are often deposited there. In the Church Neck wells we found shoes and the wooden toolbox that is displayed next to the dugout canoe in **The Story of Virginia** exhibit at the Virginia Historical Society. These objects have been preserved by the mud at the bottom of the well and give us clues about how shoes were made in early Virginia. Does the shoe look like something that has been underground for more than 300 years?

Activity 6: What We Found: part 2, Church Neck Wells

Have you ever played Mad Libs? It's an activity where students rewrite a story by filling in the blanks. Tell your students that you are going to rewrite the story of the Church Neck wells. Read them the section on "Church Neck Wells" and pass out the activity. Have them fill in the blanks according to the instructions. Then, have them share their answers.

If your students have done Mad Libs in the past, this will be easy; otherwise, it will be confusing. Have them do a Mad Libs activity first. Then, you might want to do the activity together before they try it on their own. They might also work in groups. If they are struggling, give them some of the hints listed below. Look over the activity ahead of time and make sure your students will understand the directions.

- (1) a force or activity that may cause erosion (hint: waves, wind, rain, water, rivers, deforestation)
- (2) the name of a place
- (3) a region of Virginia (hint: Coastal Plain, Piedmont, Valley and Ridge, Blue Ridge Mountains, Appalachian Plateau)
- (4) the same force or activity that may cause erosion you chose for #1
- (5) a century (hint: 16th, 17th, 18th, 19th)
- (6) the same force or activity that may cause erosion you chose for #1
- (7) the action (ending in "ing") that corresponds to the force or activity selected (hint: washing, blowing, falling, flowing)
- (8) a number
- (9) a year in the century you chose for #5
- (10) a year fifty years later than the year chosen for #9
- (11) a structure or feature associated with #12 (hint: barn, slave quarter, kiln, chimney)
- (12) a business or industry associated with the region listed in #3 (hint: farm, plantation, brick works, furnace)
- (13) the name of the place you chose for #2
- (14) an artifact associated with #12
- (15) another artifact associated with #12

Solving History's Mysteries

Activity 6: What We Found: part 2, Church Neck Wells

Activity Sheet

Complete the paragraph. In each numbered blank, write an appropriate word, number or phrase according to the directions below.

- | | |
|---|---|
| (1) a force or activity that may cause erosion | (8) a number |
| (2) the name of a place | (9) a year in the century you chose for #5 |
| (3) a region of Virginia | (10) a year fifty years after the year in #9 |
| (4) the same force or activity that may cause erosion you chose for #1 | (11) a structure or feature associated with #12 |
| (5) a century | (12) a business or industry associated with the region listed in #3 |
| (6) the same force or activity that may cause erosion you chose for #1 | (13) the name of the place you chose for #2 |
| (7) the action (ending in "ing") that corresponds to the force or activity selected | (14) an artifact associated with #12 |
| | (15) another artifact associated with #12 |

Everyone has seen how _____ can cause erosion. Since the early 1600's many
entire farms and small settlements have disappeared. At _____ in Virginia's
_____, _____ had destroyed everything on a
_____-century farm. When the property owners found a barrel sticking out of the
ground, they called the Department of Historic Resources and we went to check it out. The barrel turned out to be the bottom
part of an old well that had been lined with barrels, not brick. Meanwhile, the _____
kept _____, so we spent two weeks at the site to record and recover all we could
before it was lost forever. We found _____ other barrel wells around the property and
artifacts that told us the wells probably dated from between _____ and
_____. That's a lot of wells for one farm. We also found the remains of a
_____. That fit with what we learned from the local records that told us there was a
_____ there at the time. The bottom of a well is a good place for archaeologists to
find clues because discarded artifacts are often deposited there. At _____ we found
_____ and _____. These objects have been preserved
by the mud at the bottom of the well.

History in the Lab

Why should we care about the past? Most people feel strongly about the need to protect the past because knowledge of it helps us to know where we as a people come from. That's why we work so hard to preserve the record of our history. New technologies are constantly being developed that allow us to study history in different ways.

Artifact Conservation

Conservation is the careful treatment of artifacts so that they can be preserved and studied.

Artifacts are first slowly and carefully cleaned using tools and chemicals that will not harm fragile materials. Then, a plan for treatment is established based on each object's materials and condition.

Sometimes, preservation of an object is simply a matter of keeping the air around it at just the right humidity. If air is too dry, wood cracks, paint flakes, and paper and cloth become brittle. If air is too moist, mold grows and insects are attracted.

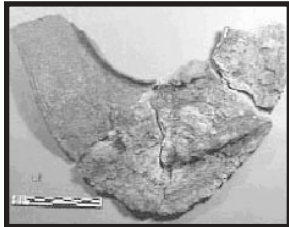
There are as many ways to preserve artifacts as there are objects in a site, and each one must be treated individually.

What We Learn

We learn from artifacts we find by trying to answer questions: What is it? What is it made of? How was it made? Careful conservation shows us that the corroded—and dirt-covered—object below is a piece of armor that protected a soldier's upper chest. Because the colonists were given old and outdated armor, scholars from England now come to Virginia to study the "surplus" armor that was sent here in the 1600s.



BEFORE Conservation: This single gorget, a piece of 17th-century plate armor, was revealed during excavation at Jordan's Journey near Hopewell, Virginia.



DURING Conservation: First, the fragile pieces were treated to prevent further corrosion. Then, mechanical tools were used to remove the rust from the front side only.



AFTER Conservation: The pieces were mended, small holes filled in, and the entire object given a special coating for protection.

Trace Element Analysis

All metals contain traces of other metals or other elements. The combination of the metal and the amount and kinds of other elements found in it provide clues as to where it was mined. This is called a "signature" and no two are alike. "Signatures" help us learn about trade between different people and how they lived.

Scientists test metals in two ways to find traces of other elements: Proton-induced x-ray emission spectrometry, or "PIXE," and neutron activation analysis. We take small pieces of the material we want analyzed and send it to a laboratory. The results from the laboratory tests, and what we learned from the other artifacts, help us understand the site and the people we are studying.

What We Learn

Knowing where objects or raw materials originated tells us how people and sites are related to each other.

We found pieces of copper at Jamestown that colonists brought from England and made into ornaments to trade with Native Americans. We found copper ornaments at the nearby Indian village of Paspehegh. Trace element analysis showed that the Paspehegh copper came from England, not North America. This analysis helps prove that the people of Paspehegh and the Jamestown colonists lived as neighbors and traded with each other. It also shows that the colonists planned ahead and brought with them materials valued by Native Americans.



Pieces of copper.



The excavation of Jamestown Fort in 1994 revealed a large pit containing pieces of copper.

✎ **Activity 7: The Virginia Company, Adventurers and Planters: Predicting Outcomes, Part 1.**

(If you are in the museum, have your students watch the "Trace Element Analysis" and "Conservation" videos, then do this activity.)

Tell your students that, among the English, there were two kinds of people important in the settlement of Jamestown—adventurers and planters. Adventurers were stockholders in the Virginia Company of London. They were called "adventurers" because they "ventured" their money, in the hopes of getting a profit. The other group were planters, people who actually "planted" themselves at Jamestown.

Divide your class into two groups—adventurers and planters. Tell the planters that they are going to Jamestown. They will be exposing themselves to danger, but they do not have to pay anything. Tell the adventurers that they are staying in England, but it is their job to outfit the planters.

Ask each group to make a list of the things that the planters will need to take with them. Tell both groups to include everything they can think of, but remind the adventurers that they are paying for it. Even though they might begin by brainstorming, remind both groups that they are to come up with a single list.

Compare lists. Does the planter list include things not on the adventurer list? Why? Choose several items that are on both lists and give your students a price range for that item. For example, tell them, "a good axe costs \$10, but you can get a used one for \$5. Which should we get?" Read the "What We Learn" section of "Artifact Conservation." Are they surprised that the armor found at Jordan's Journey was old and outdated when it was given to the planters?

Extending the lesson: Tell your students that in our society the person paying for an item is usually also the consumer. A consumer may choose a variation or brand of an item that is more expensive than another. At Jamestown, the purchaser was not the consumer. How did that affect the choices that were made in the purchasing of items?

Have your students think of other situations where the individual or organization paying for an item or service is different from the consumer of that item or service. (Medical insurance, a new work computer, and teaching supplies are a few suggestions that come to mind.) Who makes the final choice? How might the consumer feel about the choice that has been made?



Excavation of Jamestown Fort. Images on pages 29-30 courtesy of the Association for the Preservation of Virginia Antiquities

Activity 8: The Virginia Company, Adventurers and Planters: Predicting Outcomes, Part 2.

After preparing your students with the first activity, give them copies of the “What We Learn” section from “Trace Element Analysis.” After they read it to themselves, choose someone to read the section aloud. (Paspehegh is pronounced PASS·Peh·HEY.) Ask the students, “How did the Virginia Company [adventurers] choose to supply the colonists [planters] with food?” (Remind them that, in addition to copper, planters used tools, cook ware, and other items for trade.) In return, the Powhatans gave the colonists corn. Ask, “What would happen if the Native Americans stopped trading with the English colonists?” After discussion, point out that when John Smith left the colony in October 1609, the trade network fell apart. This led to conflict between colonists and natives and, for some colonists, hunger and eventual starvation.

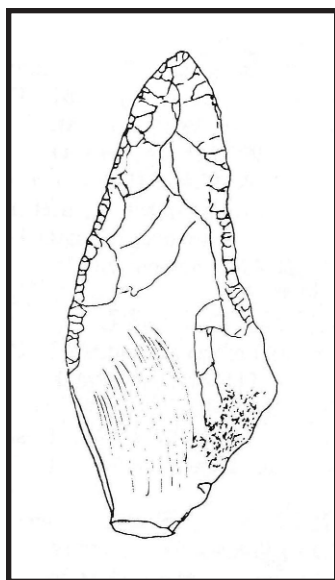
Protein Residue Analysis

Sometimes we find Native American artifacts like points and scrapers that have small traces, or “residue,” of protein from blood or tissue on them. If we knew what kind of animal the protein was from, we’d know a lot more about the artifact and how people used it. Today, using a method developed to help investigate crimes, we can test the residue and find out what kind of proteins are in it by matching them with known human and animal patterns.

This is done by removing traces of blood or tissue from the tool and testing it using chemicals called “anti-sera.” When the chemical and the “residue” from the tool react to each other, it tells us what kind of animal was killed and we learn how early peoples lived and worked and what animals they used for food and clothing.

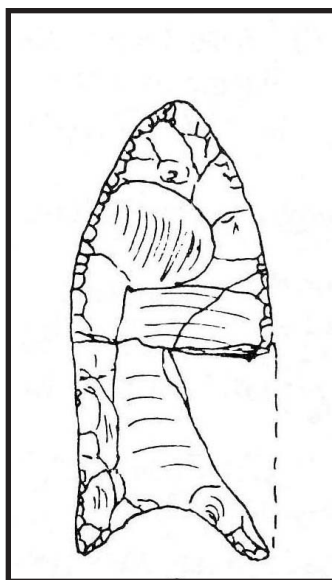
What We Learn

At the Cactus Hill site south of Richmond, we studied stone scraping and cutting tools using protein residue analysis to find out what kinds of animals were hunted and eaten in Virginia 11,000 years ago. Tests showed that early Native Americans hunted deer, elk, rabbit, and bovine, which were bison or muskox no longer found in the wild in Virginia.



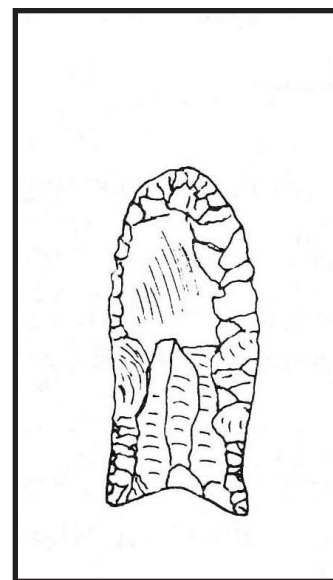
artifact 1

result: bovine



artifact 2

result: deer, elk



artifact 3

result: bovine, rabbit

Drawings by Joseph and Lynn McAvoy, Nottoway River Survey—Archaeological Research

Radiocarbon Dating

Radiocarbon dating is the most important technique for dating sites more than 300 years old. Animals and plants absorb carbon during their lives but stop doing so when they die. One kind of carbon, Carbon 14, decays at a steady rate. By measuring the amount left in a piece of charcoal or bone, we can tell how old it is.

To tell the age of a site using radiocarbon dating, a sample of organic material such as charcoal or bone is sent to a special lab for testing. Charcoal is one of the best samples because it is largely made of carbon and is found in most Native American sites where fires were used for cooking, heat, and light.

Radiocarbon dating is the most reliable absolute dating technique available. It tells us the age of an individual sample, the age of the other artifacts found in the same layer, and when people were living there.

What We Learn

The Brook Run site in Culpeper County is an unusual site. It is a jasper quarry where material for stone tools was mined. Unfinished stone tools are difficult to date, but a radiocarbon date from charcoal in fire pits at the site established that the quarry was being mined by Native Americans more than 11,000 years ago.



Hearth or fire pit feature where charcoal samples were taken for radiocarbon dating.

News from the Past

If you think history is “old hat” and that we already know everything there is to know about it— guess again. Archaeologists find something new about the past nearly every day. That’s why both U.S. and Virginia laws require that public projects like building highways check to see if a new road or building will destroy irreplaceable information that would tell us something new about history. That is just what happened between the summer of 2000 and the spring of 2001 when archaeologists working for the Virginia Department of Transportation found evidence that ancient Native Americans were skilled miners.



An archaeologist working at Brook Run Site in Culpeper County.

What is the Brook Run Site?

Brook Run is a very early archaeological site. The site was occupied during what is known as the “Paleoindian” time period when the first Native Americans began moving throughout North America in small groups, hunting game and gathering food. These people visited the Brook Run site during the last Ice Age, between 11,500 and 11,100 years ago to mine jasper, a flint-like stone used to make the extremely sharp cutting and scraping tools and weapons necessary for survival.

The site had not been disturbed, so we found a unique snapshot of life in ancient Virginia. Brook Run is one of the most important recent discoveries in Virginia.

How was the Brook Run Site Discovered?

The site was identified during an archaeological survey for the Virginia Department of Transportation. VDOT planned to widen Route 3 in Culpeper County, but before they started such a project, we were asked to find out if any historic resources might be disturbed. In this case, test digs revealed that there was history beneath the ground!

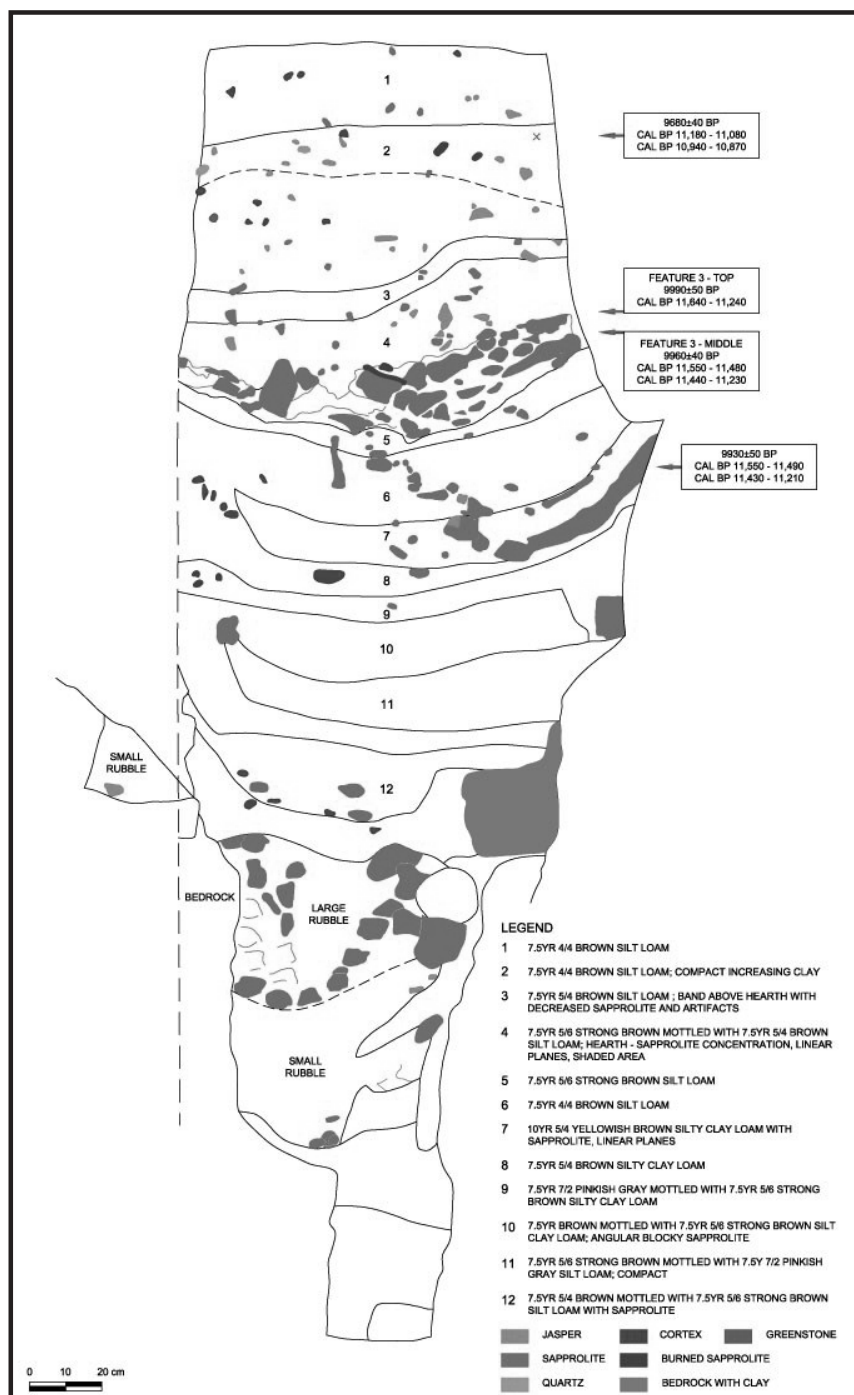
Once we realized that Brook Run was an important historic resource, VDOT changed the design of Route 3 to preserve the main portion of the site. This is a great example of how we can balance our current needs with the preservation of our history!

What did Archaeologists find at the Site?

Our investigation revealed an ancient quarry where Native Americans mined jasper, a stone highly prized for making tools. We found the mine, which was over 10 feet deep, and the remains of hearths and fire pits used by the miners. Eventually, approximately 700,000 jasper artifacts were unearthed.

Charcoal, pollen, and plant remains found in the soil give us clues to what Virginia was like thousands of years ago. The plants we found grow in colder climates than we have in Virginia today so the temperature must have been much lower then.

Carbon dating of the charcoal from the fire pits indicates that this may be one of the oldest Native American sites discovered to date.



Profile of Brook Run Site

History in Our House

Houses, like people, have histories. They exist for a number of years. They grow and age. In some ways, they change over time. In other ways, they remain unchanged over the course of their entire lives. By examining houses, we learn about the people who built them. We not only learn about how they lived, but also about their ideas and values.

Professionals who study houses are called **architectural historians**. They are like house detectives who look for clues to the past by examining old buildings. But architectural historians are not the only people interested in old houses. Often, ordinary men and women become interested in answering questions like: "Who lived in my house in the past?"; or "When was my house built?"

We are going to join a couple as they begin to renovate their house. We will begin, as all architectural historians do, by looking at the house from the outside.



Outside the House

Siding Uncovered

Today we found three different layers of siding on the house, each one a different material. The owners just put one on top of the other. Why? We were surprised to see that the bottom layer, the original wooden siding, is still in great shape, so we wondered why the previous owners covered it. We found back issues of builders' magazines at the library that had ads for false brick and vinyl siding; the ads promised the house would look more modern and be easier to take care of. Well, we like the old wooden siding best, so we are going to take the newer stuff off and try to make it look as good as it did when it was new. We want to carefully replace any areas that have rotted and put several coats of paint on the wooden weatherboard.

Vinyl Siding

(before 1970 to present)

Vinyl siding has become a standard way of siding a house when owners want a covering that does not need to be painted.

Vinyl Siding



Asphalt Panels

(early twentieth century to about 1970)

Asphalt panels, made from oil, wood fibers, and ground minerals, were made to look like brick or stone even though they often covered wood!

Asphalt Panels

Beaded Weatherboard

(1600s to present)

Wooden weatherboard was the most popular outdoor wall material for over 200 years in the southeastern United States.

Beaded Weatherboard

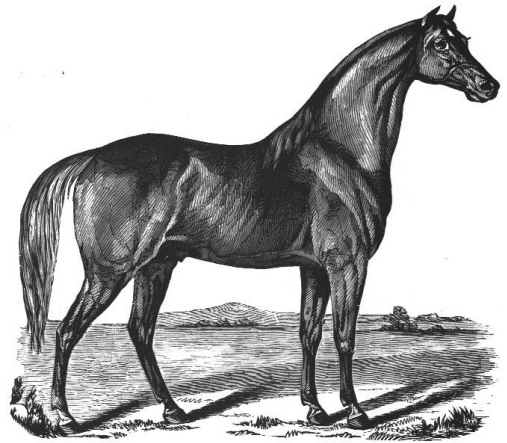


Inside the House

We have looked at the house from the outside. Now, we will go inside.

Behind the Walls - Framing and Patching

We have found an area of the wall that was patched and we want to know why. It looks like there was a fire in the house a long time ago. The wooden frame was patched with roughly sawn lumber, so this might have been before you could just go out and buy new material. Notice the way the saw marks are uneven—we were told that means that the wood was sawn by hand, which means it is probably part of the original house.



When we found hairs in the plaster, we were shocked! We thought that maybe it was so old that it was growing hair! A carpenter told us that the hairs were there on purpose—horse hair was added to plaster to strengthen it.

A Door With a Past

It looks like this door is held together by just paint! We think it is the original door because of the way it was made. We know it is old because the layers of paint are like a time line. Look at the different colors that were used—tastes change, huh? We think the hinges are really old too; they do not look like anything you could buy today.

Activity 9: In the classroom: Houses in the Neighborhood

Survey the houses in your neighborhood. How many of the outer layers can you identify?

brick (unpainted)	beaded weatherboard	stucco	vinyl
brick (painted)	stone	concrete block	wood shingles
aluminum siding	asphalt panels	horizontal board	other

How many different roof materials do you see?

slate	shingle	metal	tile	other
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Choose a house that you find interesting. Draw an elevation of the front.
(An elevation is a drawing of a house that shows one side.)



The Case of the Disappearing Fireplace



We saw the chimney outside, and an old mantel in the garage, but we couldn't find a fireplace inside, until we looked behind the walls. Someone had covered it up! When we uncovered the fireplace, we found that there was a stove pipe inside the chimney.

A friend at the State Historic Preservation Office said it was common in the late 1800s for folks to cover old fireplaces up and use a wood stove to heat their houses—it was more modern, efficient, and safer.

Now we want to open the fireplace up again, just because we like the smell of wood smoke. We will cook in the kitchen and heat the house with our furnace, so we will not need to chop as much wood as the early owners did. I bet they made their kids carry in the firewood!

Cooking Fireplace

(1600s to about the 1880s)

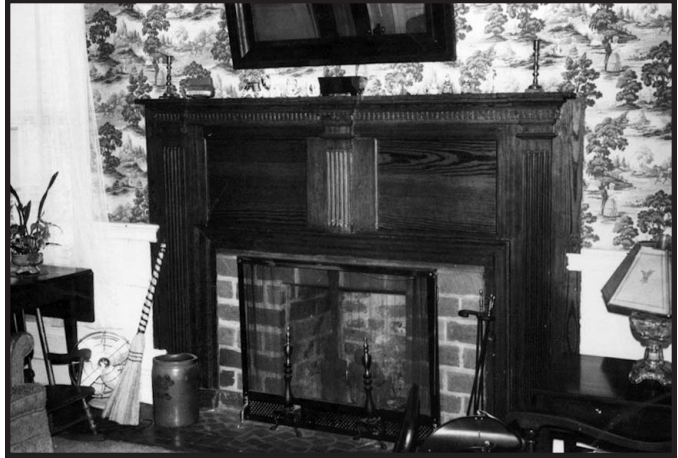
The open hearth of a small house doubled as a heat source and the main place to cook food. The fireplace had to be deep enough to fit an iron crane from which cooking pots could be suspended over the fire. The iron crane was often removed later when the hearth served only to heat the house.



Open Fireplace

(1600s through present)

The open hearth fireplace originally served as a heating source and cooking area. Today, open hearth fires provide heat, but they are not main heating sources and are often considered optional in modern houses.



Wood Stove

(1700s through present)

Iron stoves became easier to manufacture and more affordable by the mid 1800s. The stove was safer than an open fire, burned more efficiently, and radiated heat farther into the room.



Central Heating

(1800s to present)

As alternative sources of heat were developed in the late 1800s, fireplaces were closed. Coal, gas, and oil powered boilers and furnaces heated water-filled radiators. Electricity became a safe heating source by the middle of the 20th century.



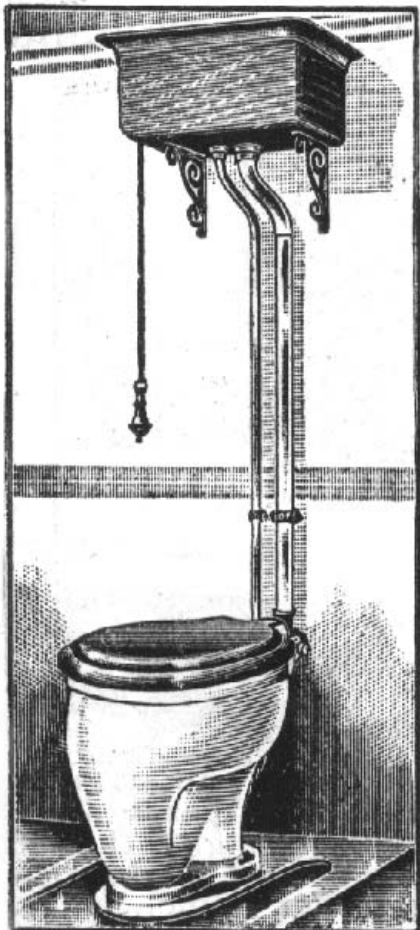
Let There Be Light

In 1820, when this house was first built, candles or oil lamps were the only source of light at night. The pipes we found in this wall were for gas lights. They were probably installed when the city made gas service available in 1892, according to records we found in the library.

Electricity became available in this area sometime after 1926, so we wondered when earlier owners wired the house for electric lights. The answer was in a letter from a member of one of the families that have lived in the house. The letter was part of the family papers that are on file at the local historical society.

The woman wrote to her son in the army and mentioned how glad she was that they put in electricity before he left to fight in France, because it made the house so bright that it seemed less lonely. This meant that electricity was installed in the early 1940s, at the beginning of World War II.

She also complained that her daughters now felt that they could stay up all night reading or listening to records. Can you imagine complaining about all the things that electricity makes possible?



No Outhouse at Our House!

Imagine a house without running water! Well, that is just what this one was until a bathroom was installed in 1922. Plumbers could not fit the pipes inside the walls, so they “boxed out” this corner. We know when they did it too, because we found an old bill from the plumber inside the walls. We also found an old screwdriver and a nickel from 1911.

Activity 10: In the classroom: Lighting, Heating, and Plumbing over Time

In the 1820s, there was no plumbing. Our house had an outhouse. Indoor toilets first became available in the late 1800s. But moving the toilet inside is just part of the story. Brainstorm with your students about the number of other changes that occurred because of advances in heating, plumbing, and lighting. Begin by writing on the board the pair of phrases that relate to "heating." Then ask your students to tell you all the ways that peoples' lives have changed because of the different ways homes have been heated. Prompt them, by asking questions such as, "Did the homeowners in 1940 gather oil as the previous owners gathered wood?" "Does a fireplace break? How about a furnace?"

	1820	1940
1. Heating	wood-burning fireplace	oil-burning furnace
2. Lighting	oil lamps	electricity
3. Plumbing	outhouse	indoor toilet

Help your students see that technological change often brings increased complexity, specialization, and inter-relatedness. Ask students if a homeowner (and his or her family) in 1820 could do all the work necessary to install, maintain, and operate the plumbing, heating, and lighting systems in his house? How about a homeowner in 1940? What does that tell us?

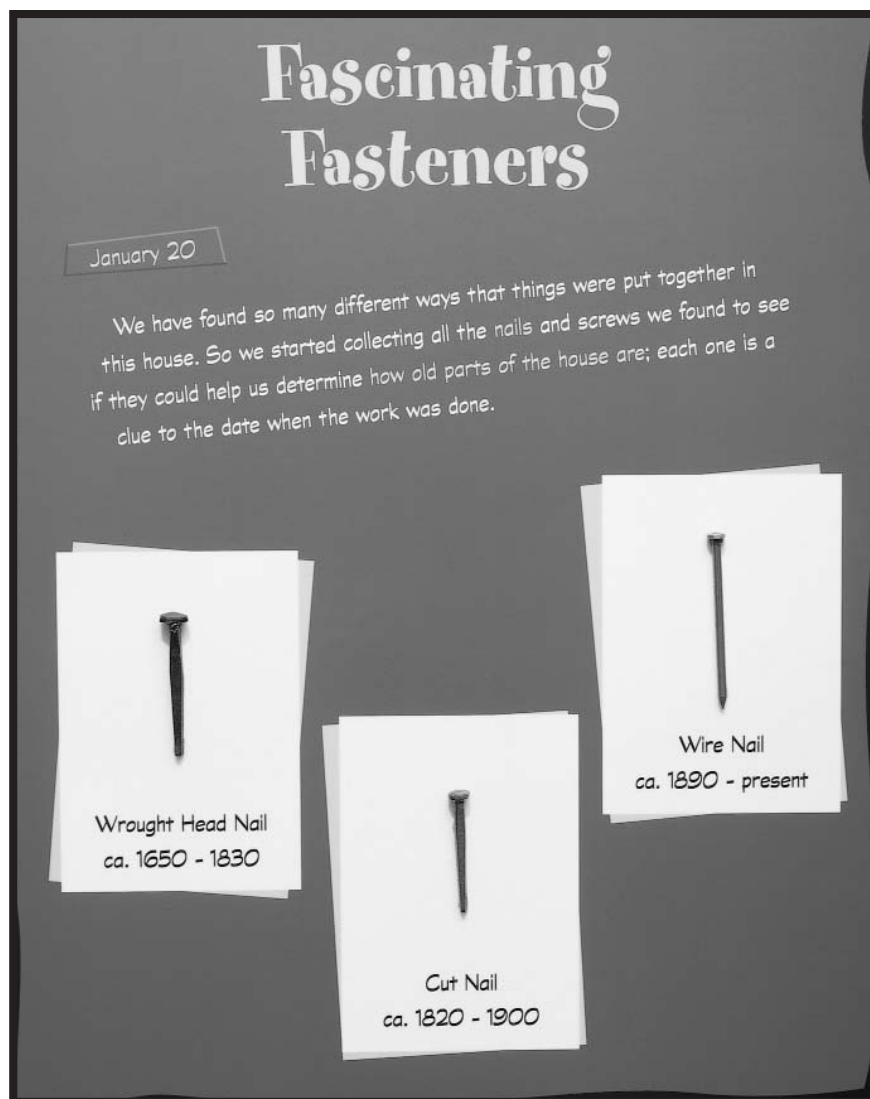
Ask your students if they have ever lost their electricity for a long period of time. How did that affect the way they lived? Did they wish they had more candles? If it was in the winter, did they wish they had more blankets and warmer clothes? If it was in the summer, did they wish that they had more windows to open? Ask your students, "if you lost your power permanently, what changes would you want to make in your house or apartment?"

Notes

This image shows a single sheet of white paper with horizontal blue ruling lines. The lines are evenly spaced and run across the width of the page. There are approximately 20 lines visible. The paper has a slight shadow on the right side, suggesting it's resting on a surface.

Fascinating Fasteners

We found many different ways that things were put together in this house. So we started collecting all the nails and screws we came across to see if they could help us figure out the age of different parts of the house. Each one is a clue to the date when the work was done.



Tastes Change

We wanted to remove the fake wood paneling in the family room. When we started taking it down, we found lots of layers of wallpaper and paint. Tastes sure change, don't they? I guess that people have always liked to fix up their homes.

We are not wild about the blue paint, but the older paper underneath looks pretty neat. We were curious about when it was put up. So we went on a mission to the wallpaper store where the owner was able to tell us that our paper was popular around 1900. We checked the deeds and found that this was about the time that the owners sold off parts of the old farm to people who built new houses. I guess that it was starting to feel like a neighborhood, and they wanted the place to look a bit more fancy!

Wallcoverings Over the Years



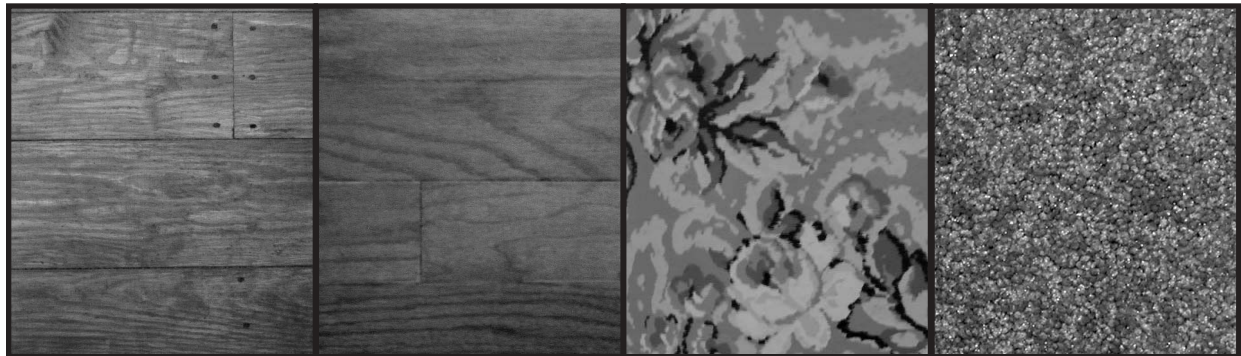
1930s

1870s

We Were Floored!

We thought that the original floor boards might still be there, so we took off the layers that had been put over them. We are going to refinish the old floors, and they are going to be beautiful. The old floor boards are very wide; you do not see that anymore! They had some very old and large trees in those days!

When we peeled back the old linoleum, we found a lot of old newspapers. A friend at the state historic preservation office told us that newspapers were often put down when linoleum was laid over existing floors. The papers all date from the same year—1918. This tells us, almost to the day, when the occupants laid the linoleum floor. Woodrow Wilson was president and the United States had just entered World War I. You could buy tires for just \$8 and local hardware stores was advertising home improvement supplies, just as they do now!



1820 - 1880
Wide random-length
pine floor boards

1880s - 1918
Tongue-and-Groove

1918 - 1970
Linoleum

1970 - present
Carpet

A Ghost?

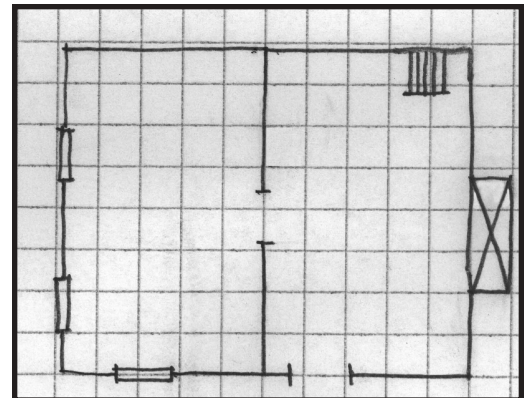
No, we did not find a ghost in our old house, just a ghost wall—the mark of a wall that now is gone. Imagine how different the house felt when this room was divided into two smaller ones. We learned that the house originally had a typical **Hall-and-Parlor** design. The hall was a public or “living” space, used for eating and cooking. The parlor was a private space, used as a bedroom.

When is the Outside on the Inside?

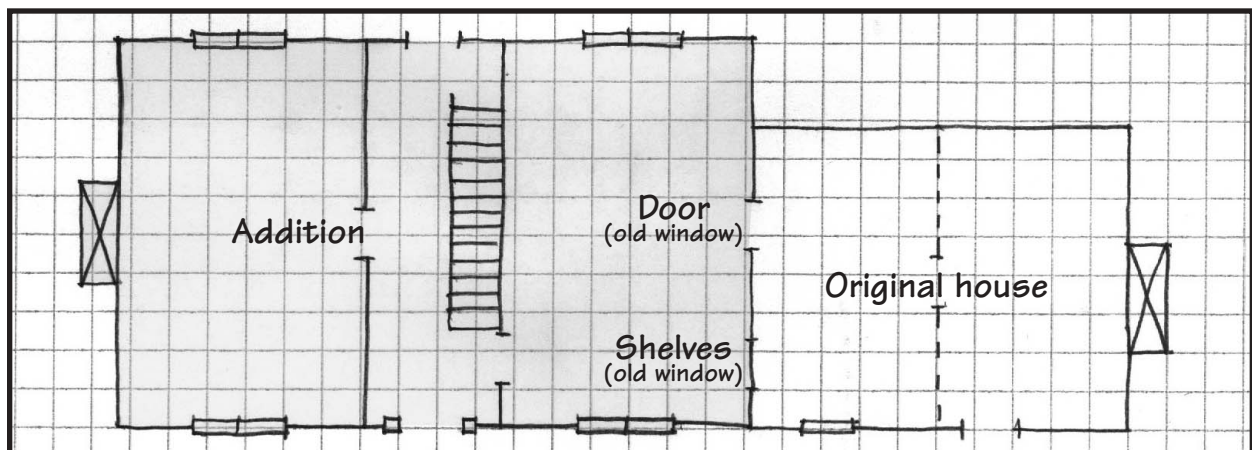
When you add a room, that’s when.

We wondered why this set of shelves looked so much like a window. Did they used to have windows between rooms? We found our answer when we took off the paneling and discovered that this wall used to be an outside wall of the house. When the owners needed more space, they just built a new room next to this one, made the window at the right into a doorway, and filled this one in to make some handy shelves. The outside wall became an inside wall.

Original house
Hall-and-Parlor style



House with addition



A New Old Window

We found this old window in the attic; we think it is original and we are going to replace a newer window with it. Older windows usually had more panes of glass, partly because glass was really expensive in the early 1800s. Each pane was made by hand, and it was not possible to make the pieces very large. That is why there are more, smaller panes of glass in the old window than in the new one.



Activity 11: In the classroom: Drawing Floor Plans

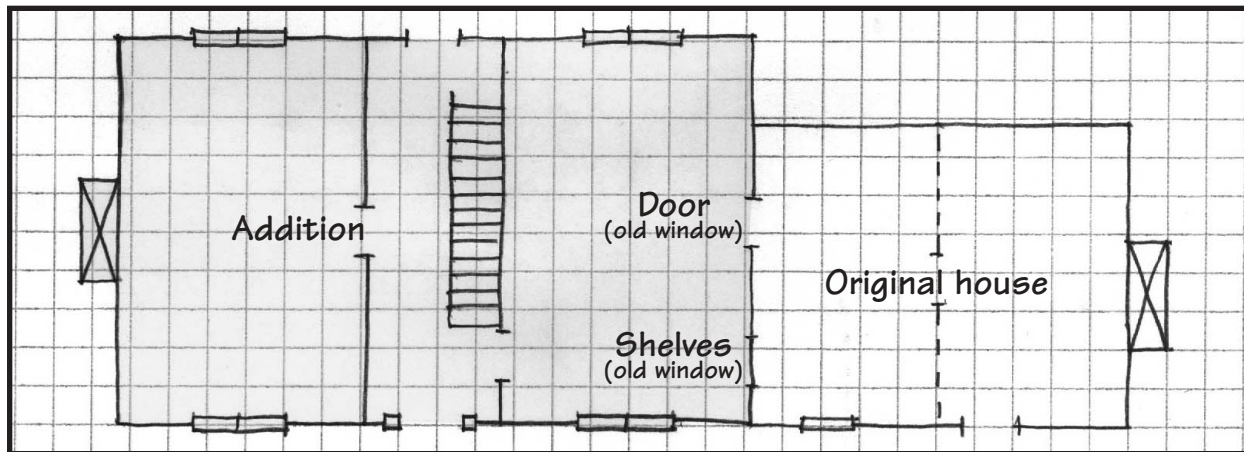
The two drawings on the previous page are called "floor plans." They show the interior area of a house or building. They are drawn to scale. Floor plans show the existence of permanent walls (the dotted line represents a ghost wall), fireplaces, openings, doors, windows, and stairs. Like the elevation, floor plans are two-dimensional. Elevations provide no depth; floor plans do not convey height.

Copy and distribute the following page. Make sure your students can "read" the floor plans. If your students have worked with ratios, tell them that the plans are drawn to scale—that each square on the grid represents a square yard—3 feet by 3 feet.

Using measuring tapes and working in groups, students should draw a floor plan of the classroom. Make sure they include windows, doors, and other permanent features.

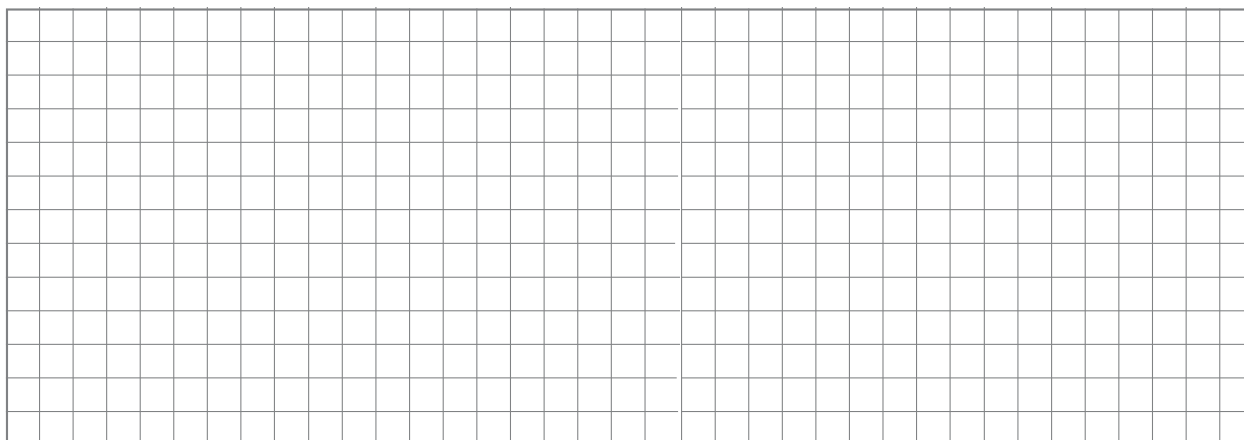
Activity 11: In the classroom: Drawing Floor Plans.

Examine the floor plan below. Can you identify all the features—doors, windows, fireplaces, chimneys, and stairs? Each grid represents three square feet. What are the dimensions of the original here? What are the dimensions of the house with the addition?

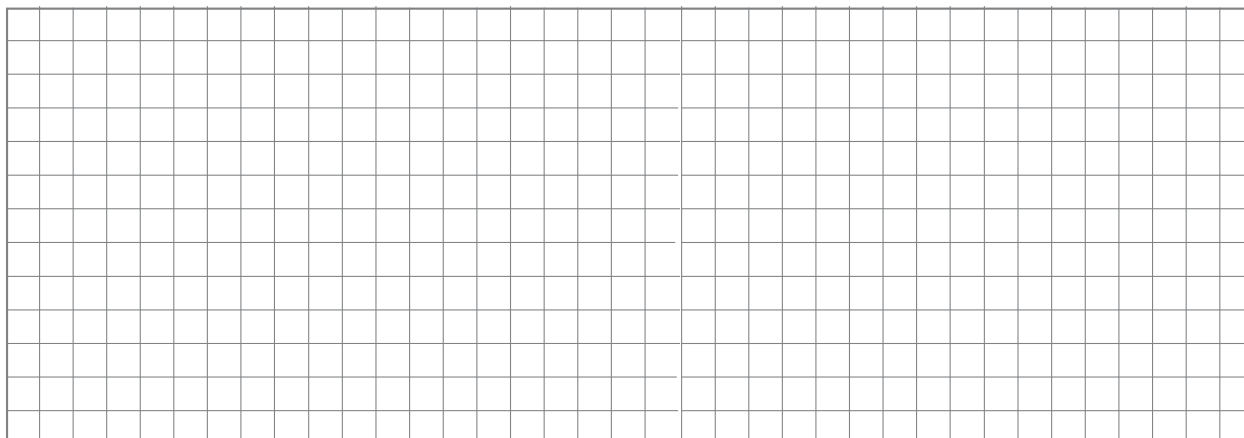


addition

original house



On the grid above, draw a floor plan of your classroom. Using the grid below, draw a floor plan of another building.



How Old is the House?

We knew the house was old, but how old? We wanted to find out who built it and when. We started asking questions and found that historic records kept in libraries and historical societies might help us trace the history of our house. We researched the county land tax records, beginning with the most recent property owners and working backwards in time. We found the name of the first owner of the land the house was built on and the record of what he paid in taxes each year. In 1820 his taxes were increased by \$200. The record stated that this increase in taxes was because of a new building on the property. This makes us pretty sure that this owner built our house that year.

Who Lived Here? What Were the Owners Like?

We knew that a house as old as ours probably had many families that lived in it through the years. We wanted to find out about as many of those owners as we could. Using the recorded land deeds for the property, we were able to trace the names of the other families who owned this house. But these only gave us their names; how could we find out more? A person who works at the Library of Virginia showed us the local personal property tax records. They have them for many counties back to the early 1800s! They told us that the owner of our house in the 1840s was fairly wealthy. Besides the house and land, he owned some large pieces of furniture, a carriage, a gold watch, and a carpet costing \$75. We suspect that the piece of carpet we found tacked underneath a built-in cabinet in the dining room is left over from that carpet.

State of the Tax on Houses & Lots in the City of Richmond for 1840

Proprietors	Tenants	Yearly rent	Rate
William Allegree	Thomas Stuart	25-0-0	1 32
Peter Aubrey		20-0-0	1 6
Ditto	Negros	10-0-0	2 9
William Auster	John Holly	50-0-0	2 63
Wm. Auster		50-0-0	2 63
Nathaniel Allen		90-0-0	4 60
John Allen		15-0-0	30
William Allen		25-0-0	1 32
William Alexander	Julius B. Bandridge	60-0-0	3 13
William F. Ash		36-0-0	1 01
Richard Adams	Samuel Warrick	70-0-0	3 67
Ditto	Shir. Cunningham	30-0-0	1 58
Ditto	Negros	15-0-0	30
Ditto		60-0-0	3 13
James Anderson & Co.	Shir.	20-0-0	1 6
Ditto	Thomas Nicolson	45-0-0	2 36
John Adams		45-0-0	2 36
Mat. Anderson & W.		30-0-0	1 58
Frederick Argyle	Robert Johnston	100-0-0	5 22
Samuel Adams	Lumber House	12-0-0	62
Isaac Backus		40-0-0	2 9
James Brown	Barack Smith	100-0-0	5 22
Ditto	Samuel Clarke	120-0-0	6 28
Ditto	James Thompson	100-0-0	
Ditto		100-0-0	
John Beale			

What Was the Family Like?

Did you know that Virginia counties have had a census taken every ten years since 1790? County census records provide information about the families that have lived in the house. The 1870 census tells us some interesting things about the family who lived here then. We found out the names and ages of the family members, learned which of the children went to school, and found out that the owner was a farmer and that though his wife was born in Virginia, he was born in England.

Still, we wanted to know more about the people who have lived in our house. We asked the Virginia Historical Society about any family papers associated with our house and found that the daughter of the banker who lived here in the 1880s kept a diary! Because her mother was involved with the local preservation group and her father was the owner of a local bank, the family was well known and respected. All of their diaries, letters, account books, and other papers were saved by their descendants and donated to the historical society. The collection even include copies of bills and receipts showing how much was paid for the fancy hinges on the front door in 1874 and new glass for the windows in 1882.

Activity 12: In the classroom: The Census

Reproduce the portion of the Richmond census page for 1870 and give a copy to your students. If they cannot read the column headings, provide them with the information below. What can they learn about families by looking at the census?

- | | |
|---|---|
| 1. Dwellings, numbered in order of visitation | 11. Father of foreign birth (if marked) |
| 2. Families, numbered in order of visitation | 12. Mother of foreign birth (if marked) |
| 3. Names | 13. If born during the year, which month |
| 4. Age | 14. If married during the year, which month |
| 5. Sex | 15. Attended school within the year (if marked) |
| 6. Color | 16. Cannot read (if marked) |
| 7. Profession, occupation, or trade | 17. Cannot write (if marked) |
| 8. Value of real estate | 18. Deaf, dumb, insane, or idiotic |
| 9. Value of personal estate | 19. Male citizen who is eligible to vote |
| 10. Place of birth | 20. Male citizen who is not eligible to vote |

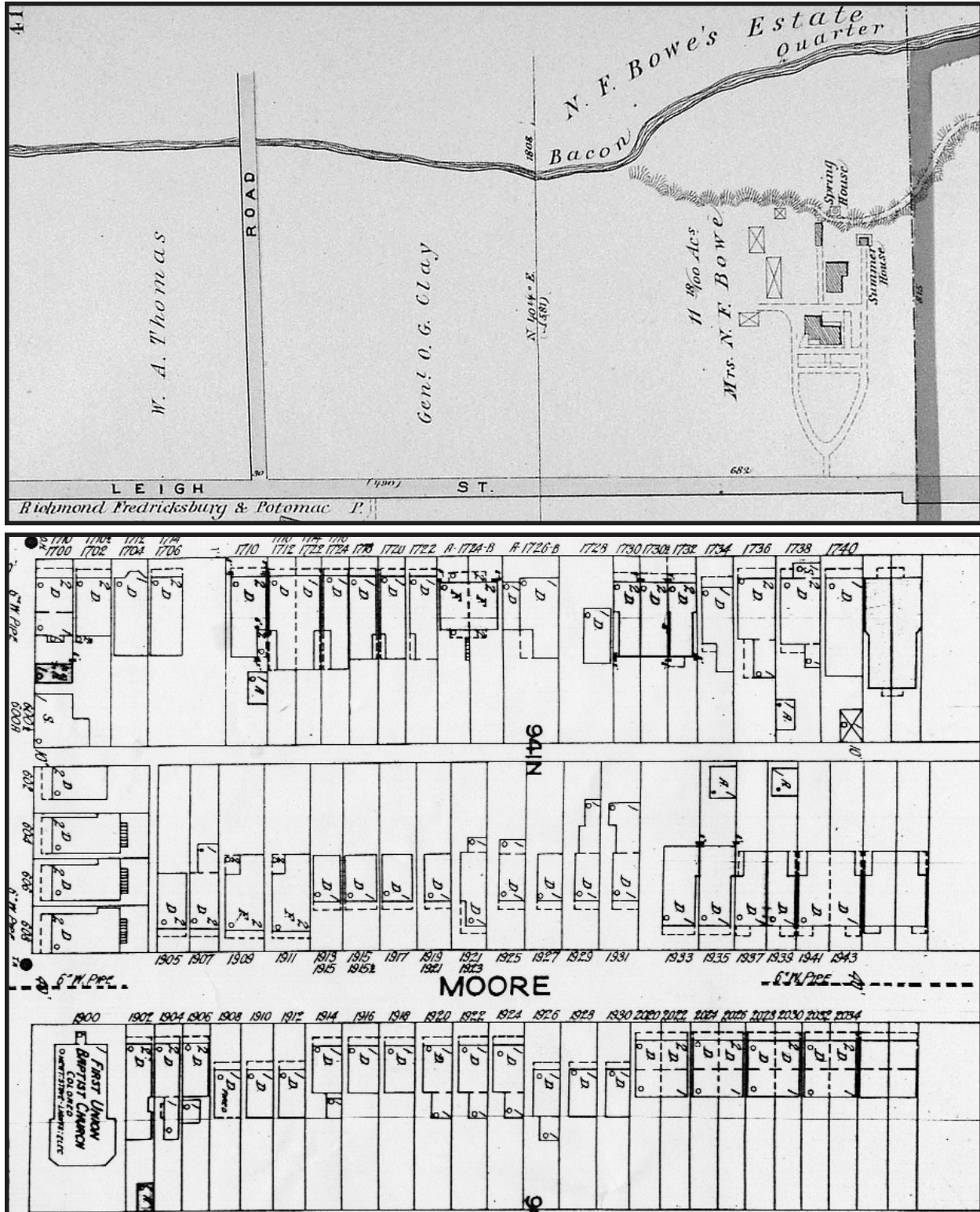
What would house number 57 look like if we could get inside? It is hard to say, but we can learn something about the families who live there. William Taylor is listed first. He is a grocer. Rebecca Harris lives there as well. She is not married to Taylor, but has three children, Cornelius, Joseph, and Llewellyn. The older sons are both store clerks and we might guess that they work for William Taylor. The Peel family also lives in the dwelling. Lewis Peel is a huckster, which means he sells fruit or vegetables in an outdoor market. He is from Georgia. His wife, Caroline, is from Prussia and cannot read or write. Their daughter, Emma, was born in Virginia. The fourth family in the dwelling is African American. Thomas Calvin is the head of household, which includes Nanny Price and three children.

Page No. 17
 SCHEDULE 1. Inhabitants in North Ward City of Richmond in the County of Henrico State of Virginia, enumerated by me on the 15 day of June, 1870.
 Post Office: Richmond Ch. H. Hays, Ass't Marshal.

Dwelling hereby numbered in "order of Enumeration."		Family numbered in "order of visitation."		DESCRIPTIVE.			Profession, Occupation, or Trade, of each person, male or female.	VALUE OF REAL ESTATE OWNED.		Place of Birth, naming State or Territory of U. S., or the Country, if of foreign birth.	PARENTAGE.			If married within the year, state month, day, and year of marriage. (Give full name of wife.)	Attempted school within the year.	Educa- tion.	Whether deaf and dumb, blind, insane, or idiotic.	CONSTITUTIONAL RELATIONS.	
1	2	3	4	5	6	7		8	9		10	11	12					13	14
1	55	83	Roswell August	35	M	W	Confessionary Clerk		1000	Prussia	1	1							1
2			Christina	30	F	W	Keeping house			Prussia	1	1							
3			Sarah	5	F	W	At home			Prussia	1	1							
4			Sarah	1	F	W	"			"	1	1							
5			King Margaret	13	F	W	"			"	1	1							
6			Kuttsman George	25	M	W	Saloon Keeper		100	Prussia	1	1							
7			Starr Joseph	27	M	W	Saloon Keeper			"	1	1							
8			Edith Davis	30	F	B	Domestic Servant			Virginia									
9	50	84	Edith Royall	60	M	W	Spicer	6000	800	"									1
10			Edith	53	F	W	Keeping house			"									
11			Emma	18	F	W	At home			"									
12			Walter	15	M	W	"			"									
13			Prisc Margaret	22	F	M	Domestic Servant			"									
14			Edith	5	F	M	At home			"									
15	57	85	Taylor William	28	M	W	Spicer	900	200	"									1
16			Thurs Rebecca	40	F	W	Keeping house			"									
17			Conelius	21	M	W	At home			"									1
18			Joseph	18	M	W	"			"									
19			Frederick	15	M	W	At home			"									
20	84		Leah Louis	40	M	W	Knacker			Georgia									1
21			Caroline	27	F	W	Keeping house			Prussia	1	1							
22			Emma	3	F	W	At home			Virginia	1	1							
23	88		Calvin Thomas	40	M	B	Wagon Driver			"									1
24			Prisc Nomin	25	F	M	Keeping house			"									
25			Vancey	2	F	M	At home			"									
26			Calvin Malcott	3	F	B	"			"									
27			Johnny	2	M	B	"			"									
28	58	89	Ernestine Adams	52	M	W	Dry Goods Merchant	1500		New Brunswick	1	1							1
29			Stephen	55	F	W	Keeping house			"	1	1							
30	90		Harri Albert	40	M	B	Labourer			Virginia									1
31			Louis	40	F	B	Keeping house			"									
32			Willa	7	F	B	At home			"									
33			Minna	5	F	B	"			"									
34	91		Freder Alfred	40	M	W	Knacker			"									1
35			Eliza	40	F	W	Wine Maker			"									
36			Harriet	1	F	W	At home			"									
37	92		Pelt George	22	M	W	Confessionary Clerk			Prussia	1	1							1
38	93		Calvin Maria	50	F	W	Keeping house			Prussia	1	1							
39			May	15	F	W	At home			"									
40			John	14	M	W	"			"									
No. of dwellings		No. of white females		No. of males, foreign born		6900		3600		No. of insane		15		16		10			
" families		" colored males		" females		5													
" white males		" females		" blind															

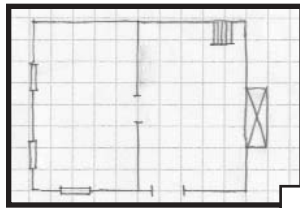
What Was the Neighborhood Like?

We also found a collection of Sanborn Company maps that showed our section of town in 1910. These maps were made for insurance companies—to show the properties in certain areas. One shows that the original property was broken up in 1910 to sell lots for new houses. Our house was in the country when it was built, but by 1910 the town had grown so much that it now reached our front door!



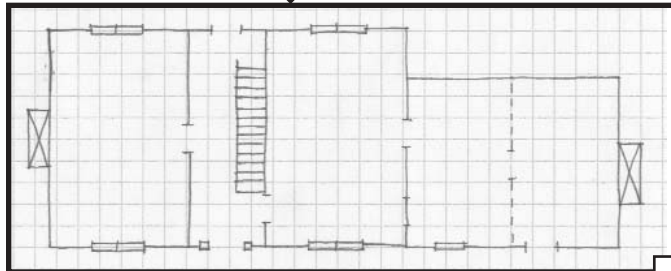
Richmond's Leigh Street west of Lombardy, 1876 (top) and Sanborn map, 1925 (bottom).

Timeline



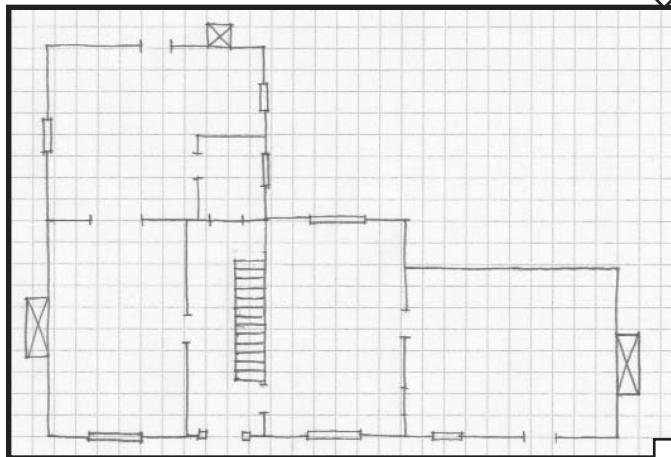
1820-1870

White farming family builds room- over-room house
Kitchen is moved inside



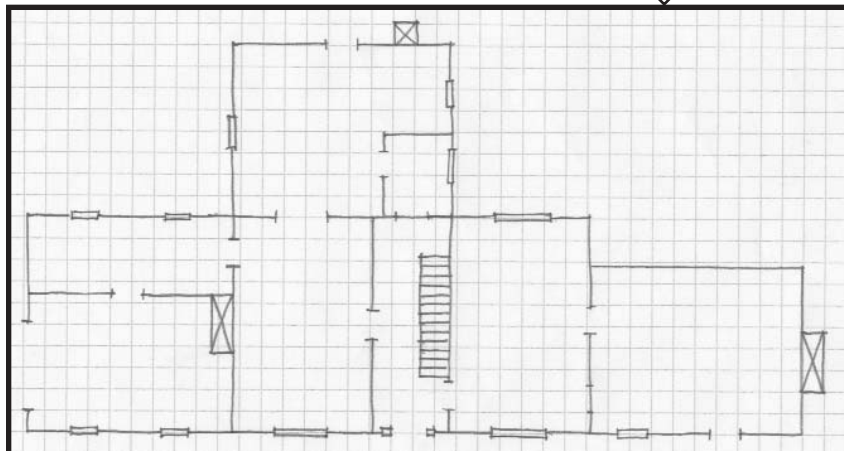
1870-1925

Banker and family expand house, sell off lots for development as town grows
Daughter keeps diary
Wife saves personal papers, organizes local historical society
Gas lighting installed, interior renovated ("upgraded")
Fireplace closed off, heat by coal stove w/pipe up flue



1925-1965

African American family, owners of local funeral home upgrade home
Electricity and plumbing put in, new siding, flooring, etc. added
Porch added, outbuildings demolished
Central heating added



1965-2001

Rental property for various families
Vinyl siding, masonite paneling installed to reduce maintenance
Detached garage built

2001

Young African American couple begins renovating the house

Putting it into Practice

Activity 13: In the museum: Exploring the Powhatan Kitchen

Divide your students into groups of four. Give each group a copy of pages 51-57 from the guidebook. After going through the house in the "Solving History's Mysteries" lab, have your students take their tool boxes to the Powhatan kitchen. Tell them not to go into the building, but to look at it from the outside.

Have them do activities #1 and #2 on page 54 and record their findings on page 56. Page 55 provides an example from the archives of the Department of Historic Resources. Then, have them go into the interior of the house and do activities #3 and #4 on page 54, recording their findings on page 58. Page 57 provides an example from the archives of the Department of Historic Resources. Have them complete the assignment by answering the questions on page 59.



The Powhatan kitchen. Gift of Mr. and Mrs. Thomas M. McCracken

The kitchen was given to the Virginia Historical Society by Mr. and Mrs. Thomas M. McCracken. The building stood on the McCracken's family property in Powhatan County (just west of Richmond) for many years.

According to family tradition, the building was a kitchen. This would have been typical of many large farms, or plantations, in Virginia. Because of the threat of fire and the summer heat, the kitchen was often in a separate building.

Activity 13: (continued) Exploring the Powhatan Kitchen

Field Notes, Instructions: Exterior of House (Use the field notes and drawings at the end of this section as a guide.)

1. Examine the outside of the house. Measure and observe. In your notes, record (write and draw)

- the kind of materials used in construction of the house, chimney, and roof
- the length and width of the house
- the number and placement of doors, windows, and the chimney
- anything else of interest.

As you examine the house, also consider the following.

- What type of siding is used and how is it attached?
- What type of windows are used in the house?
- Look at the window above the door. Why might the window be off-center?
- Examine the doorway. What evidence suggests there is something missing?

2. Face the door. Draw an elevation of the house.

Field Notes, Instructions: Interior of House

3. Examine the inside of the house. Measure and observe. In your notes, record (write and draw)

- the kind of materials used in construction of the fireplace, walls, and doors
- the placement of the steps
- the types of doors and walls
- the underside of the roof
- anything else of interest

As you examine the house, also consider the following.

- Is there any evidence that something has been removed? (Are there "ghosts?")
- How might the closets, fireplace, and upstairs have been used?

4. Draw a floor plan of the house on the field notes page. Make it to scale (1 inch = 3 feet).

Field Notes: Moore House/Orchid/Louisa County/Virginia field visit by K. Edward Lay w/ Jim Deetz and his class 3/5/94

Elevation and Notes

Moore House

1½ story, 3 bay house, 6 over 6 sash windows

weather/board wood frame hall & parlor

remnants of brick foundation

2 dormer windows w/4 over 4 sash

faces south

2 end chimneys

(once were exterior)

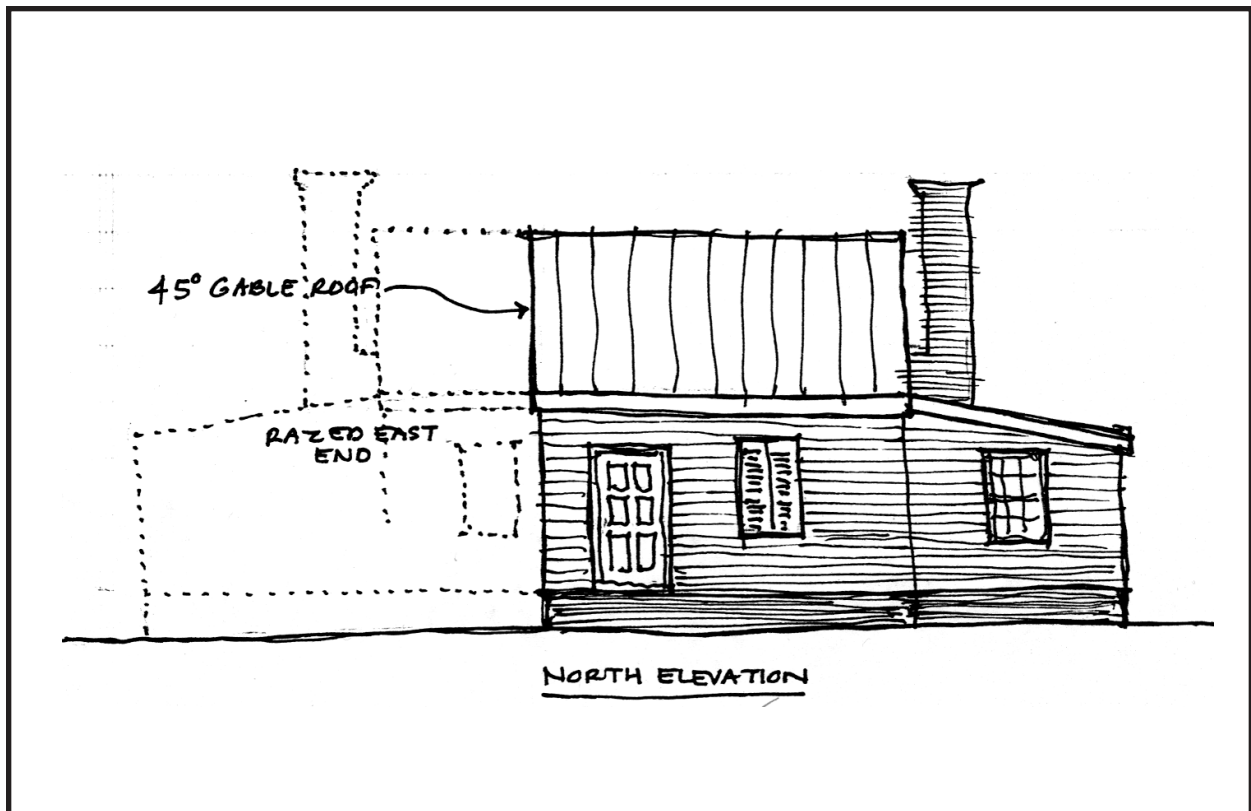
w/shed roofed

extension on east gable (east and west)

chimney is brick with common bond

door slightly off center to the east

moldings and weatherboard are very weathered



Activity 13: (continued) Exploring the Powhatan Kitchen Field Notes

Name:

Date:

Description: Exterior of House

Elevation

This image shows a full page of blank graph paper. The grid consists of small, equal-sized squares formed by thin gray lines. There are 20 columns and 20 rows of squares, creating a total of 400 square units. The grid covers the entire area of the page, leaving no margins or additional markings.

Field Notes: Moore House/Orchid/Louisa County/Virginia field visit by K. Edward Lay w/ Jim Deetz and his class 3/5/94

Floor Plan and Notes

Moore House

entered from North door

weather board on west wall indicates east end is an addition

no fireplace

plastered walls

base board

(Stairs)

enclosed winder

staircase in NW corner of room

w/cubby closet under the stairs

east upstairs room entered from staircase

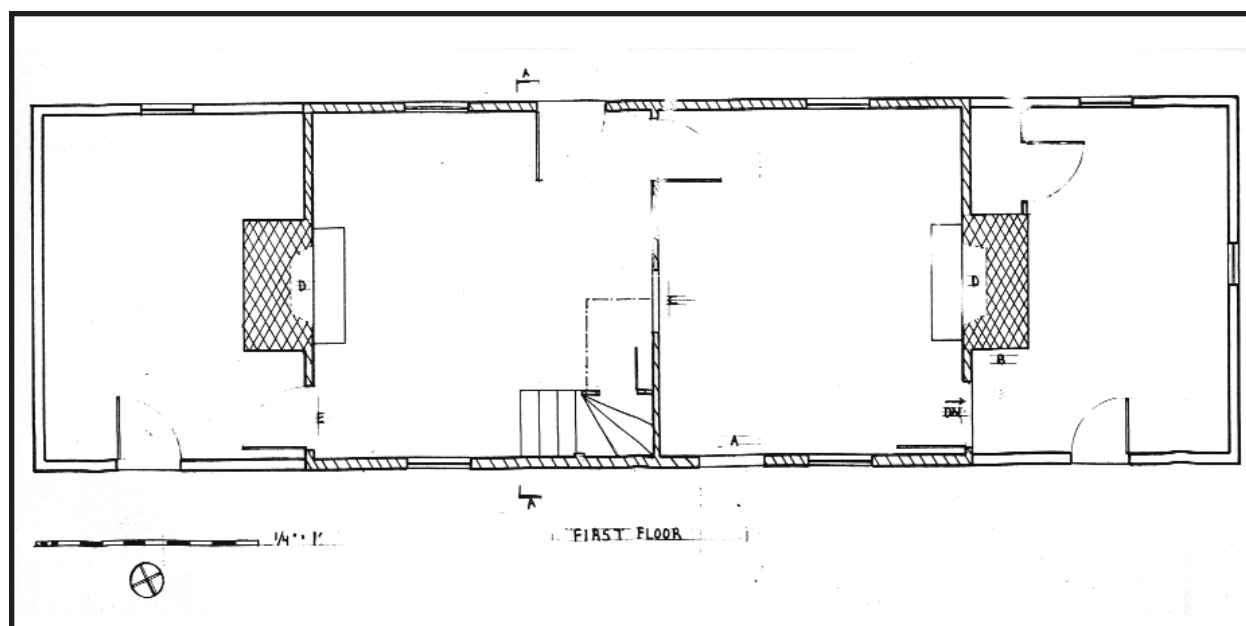
same paneling as west room downstairs

west upstairs room—heated but fireplace now covered no mantle at this time

north window added?

dormer window—all wire nails

both upstairs rooms replastered



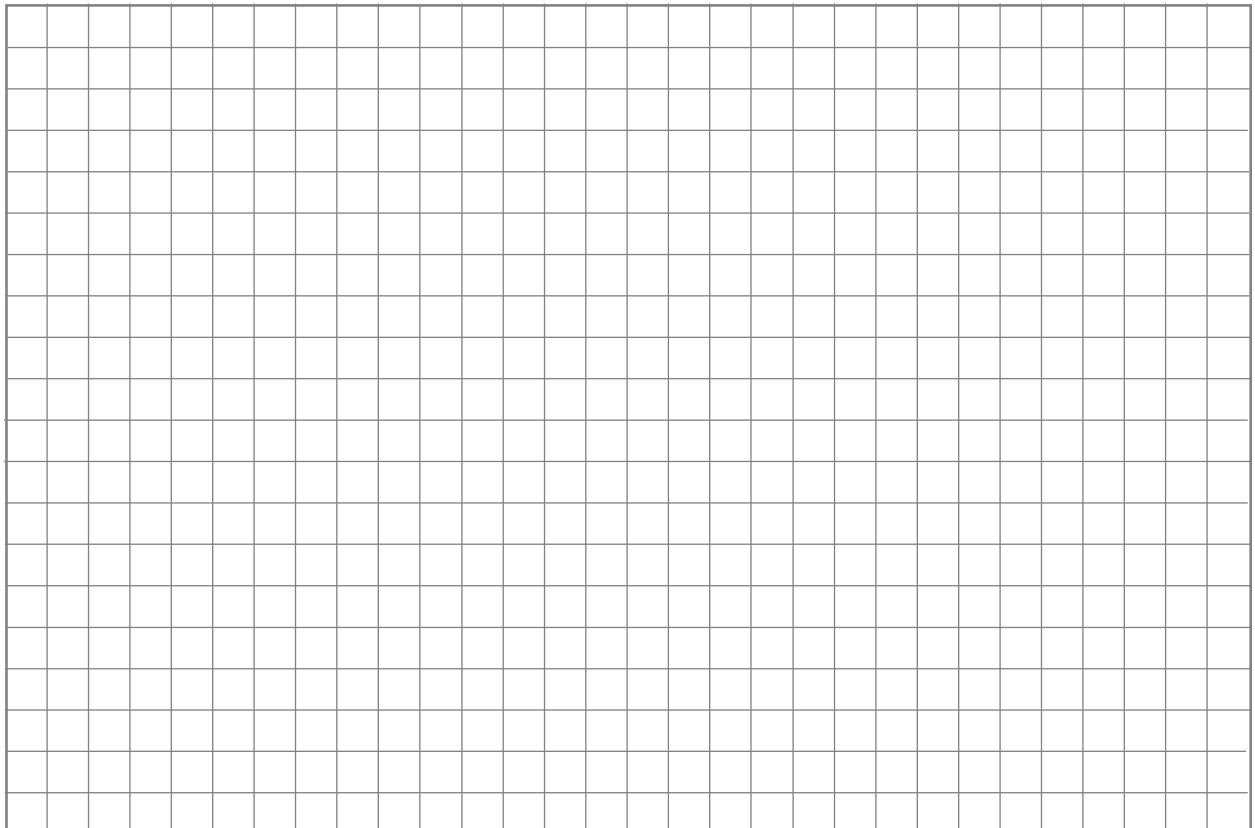
Activity 13: (continued) Exploring the Powhatan Kitchen Field Notes

Name:

Date:

Description: Interior of House

Floor Plan:



Activity 13: (continued) Exploring the Powhatan Kitchen Interior



It looks as if locks or latches used to be on the doors on either side of the hearth. How do you think the closets were used? What might have happened to the locks?

What can you tell about the people who built the Powhatan kitchen?

How has the building changed over time? What does this tell us about how the Powhatan kitchen house was (and was not) used?

Summary: Choices and Consequences

Each part of the **Solving History's Mysteries** exhibition uses a building or archaeological site to illustrate different ways in which architectural historians and archaeologists use historic resources to learn about the people who lived and worked in Virginia.

In each case, there were decisions that people made to preserve, study, or destroy some or all of the building or site that tells the story. Lead your students in an exercise to examine those decisions, the consequences of choices made, and possible outcomes and options had the people involved made different choices.

Select, or ask your students to identify, one area and/or story from the exhibition—especially ones that they found particularly intriguing.

- What was some of the evidence that researchers used to uncover that story?
- What were some of the choices made that helped to preserve the information, building, or site for future generations?
- What would have been the outcome if different decisions had been made?

Some examples include:

Brook Run: The Paleoindian jasper quarry discovered when the Virginia Department of Transportation (VDOT) was planning to widen Route 3 between Fredericksburg and Culpeper. If VDOT had planned to widen the road by building new lanes south of the existing Route 3, they never would have even found the site. If the archaeologists had not realized that they had something very unusual and VDOT not agreed to investigate further, the site would have been destroyed to build the new road without ever learning that it was a jasper quarry used by Indians thousands of years ago. Instead, as a result of the investigation, VDOT chose to move the westbound lanes a few yards closer to the eastbound lanes, making the median more narrow, and preserve the site.

Yorktown Shipwrecks: At the Battle of Yorktown, Lord Cornwallis tried to block the French navy by sinking his own ships in the York River. Archaeologists have known of the ships' existence for a long time, but had neither the technology nor the funding to find the actual locations and partially excavate one of them. With each passing year, currents eroded much of the site—and perhaps its potential value to historians and archaeologists. Both technology and cost were issues in the excavation of the Betsy. As mentioned earlier, as archaeologists excavate a site, they destroy it. Are there times when archaeologists may decide to wait to excavate a site? If so, how do they balance the potential damage to a site over time with the promise of new and better technologies that will aid in gathering more information in the future? In the case of the Betsy, archaeologists delayed excavation for many years. What does this choice indicate about their faith in the future of the profession? Are there occasions when "good stewardship" means doing nothing?

Jordan's Journey: Jordan's Point, a small peninsula near the confluence of the Appomattox and James rivers, has enticed human settlement for thousands of years. The natural beauty of the area attracted a group of developers to purchase the property and make plans to build a large housing development. They discovered evidence of previous habitation on the site and contacted the Department of Historic Resources. A team of archaeologists, over a period of years, conducted several excavations on the property. They found evidence of early native habitation, probably by the Weyanokes. They also found evidence of a plantation—a small substantial 17th-century English settlement—that has significantly influenced the way historians and archaeologists look at community organization on the early colonial frontier.

The development at the site of Jordan's Journey is a good example of balancing the legitimate goals of the developers with the existence of historic resources. The developers were not required by law to excavate or protect the archaeological sites; they were not required to contact the department, but they did. The resulting work by the department revealed important tangible evidence of the people who came before. Only part of the site was excavated, due to the time and budget constraints of both parties and the developers' need to move ahead with the project. When the roads and houses were built, information and artifacts in the ground were destroyed. Many unexcavated features remain intact in the development's green spaces and private yards. Still, these developers did more than most. What would have happened if they had decided

not to contact the archaeologists? What would have happened if the developers had chosen to invest more time and money in excavating the site? How much more could we learn about our past if other developers chose to conduct archaeological studies? Are there cities and counties with local regulations that require archaeological survey before development is underway?

"Our House" is full of examples about how the decisions of previous owners shaped the house as it is today and how those decisions also help tell the story of those owners and their families. Even the young couple, whose efforts to fix up the old house give us the evidence to tell these stories, adds to the larger story of the house and the community. One of their choices is the decision to buy the house and rehabilitate it rather than tear it down to build something new. They also have chosen to do careful research, learning about the history of the house to help them decide how to fix it up.

Bringing it all home:

After students have examined the various parts of the exhibition and/or have completed some of the exercises in other sections of this guide, introduce your students to historic buildings, sites, or districts (neighborhoods) in your community. You can either use the "History All Around Us" computer interactive in the exhibition that has sample historic properties from every county and major city around the state, or examples that are even closer to home for your students. Some discussion questions might include:

Now that you know what kinds of things an archaeologist looks for, what do you think we could learn from "... site?

Now that you know what kinds of things an architectural historian looks for, what can you learn from "..." (historic building or district)?

What would be lost (or gained) if that building or site was no longer here?

In what ways do historic resources help to define a community?

How do residents of a community benefit from significant historic resources in their neighborhoods and downtowns?

Archaeology and Historic Preservation in the News

Archaeology and historic preservation activities and decisions are often in the news. Articles report the success of local restoration projects, the loss of historic sites, the economic benefits of turning old schools or warehouses into housing and stores, and some of the different approaches that individuals and communities may take when making decisions about how to integrate historic resources into new development, and how to design new buildings in historic settings to retain elements of the original structure. If you want to take the discussion of what was learned in the exhibit and use very current examples, try visiting the Department of Historic Resources' web site (<http://www.dhr.state.va.us>) and clicking on the "Preservation in the News" link on the Home Page. On the Preservation in the News page, you will find links to the latest online news articles from newspapers around the state. You can choose one or more as examples to show the breadth of what your students are learning in Solving History's Mysteries, as samples for different choices that people and communities make regarding historic resources. Or you might wish to take one story or controversy and follow it for several weeks.

Conclusion

Solving History's Mysteries: The History Discovery Lab uses archaeology and architecture to explore ways of seeing and ways of thinking. These disciplines teach us how to look at artifacts and historic buildings, and how to think about what we see. The excersies in this guide are also about making decisions affecting those resources and the effect that those decisions will have on urban and rural places for the future.

If we have done our job well, we've helped you to use the activities to teach the "skills" standard of the current History and Social Studies Standards of Learning, and at the same time, to develop your students' thinking skills, to deepen their connection with the history all around them, and to encourage their future care of the historic resources that enrich their neighborhoods, cities, and towns.

We welcome your questions or comments. Please let us know if you have suggestions for new activities, or changes to improve the ones you have used in this guidebook. Contact: Beth Acuff, Virginia Department of Historic Resources, 2801 Kensington Avenue, Richmond, VA 23221. Telephone (804) 367-2323, ext. 134, bacuff@dhr.state.va.us.

For additional teaching tools, be sure to visit the Education and Archaeological Collections sections of our Web site, at <http://www.dhr.state.va.us/educ/edu1.htm> and at http://www.dhr.state.va.us/Armor/pike_man.htm, respectively. The Education section contains online information about the *Solving History's Mysteries* exhibition, the ARK (Archaeological Resource Kit) for classroom use; and Virginia Archaeology Month, held in October. It also links to the Teaching With Historic Places Program, sponsored by the National Register of Historic Places, that offers an exciting range of eight lesson plans focusing on Virginia historic sites, from the building of the Chesapeake and Ohio Canal and Thomas Jefferson's plan for the University of Virginia, to the New Kent and George W. Watkins Schools that played important roles in integration. In the Archaeological Collections section of our Web site, students can click on illustrations of a Pikeman and a Musketeer to identify 17th-century armor artifacts.

